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RAIC JOURNAL

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EDITORIAL AND ADVERTISING OFFICES, 57 QUEEN STREET WEST, TORONTO 1
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IN A *Journal* dealing with the activities of a School, it seems appropriate to draw attention to some aspects of the curriculum being offered to students of architecture today.

Over the country the courses of each school vary according to local opportunities but, in general terms, "Learning through Doing" remains a common basis of architectural education. This fact tends to be overlooked as others, more spectacularly and more recently, have discovered the project method to be a way of coordinating their curricula and bringing diverse subjects into an intelligible focus. In architectural schools, however, a small but complete project has always been preferred to detached problems that involve isolated conditions. The project method is a tradition that dates from the period when students were apprentices learning by performing tasks for their masters in some progressive order of complexity. The practices of the Beaux-Arts ateliers gave the method prestige in the nineteenth century so that today it is the undisputed way of teaching architecture.

In itself the project method is not entirely sufficient; if it were, the subject of architecture would have little reason to be in a university at all. Several important matters that bear upon the training of an architect are drawn from other departments in the university and are better handled separately. Among these the broad position of architecture in cultural perspective is being given more attention through more penetrating courses in history and the introduction of sociology and economics. This begins a link with the social sciences that may in time be as important as the dependence on the physical sciences now recognized as basic to the arts of building.

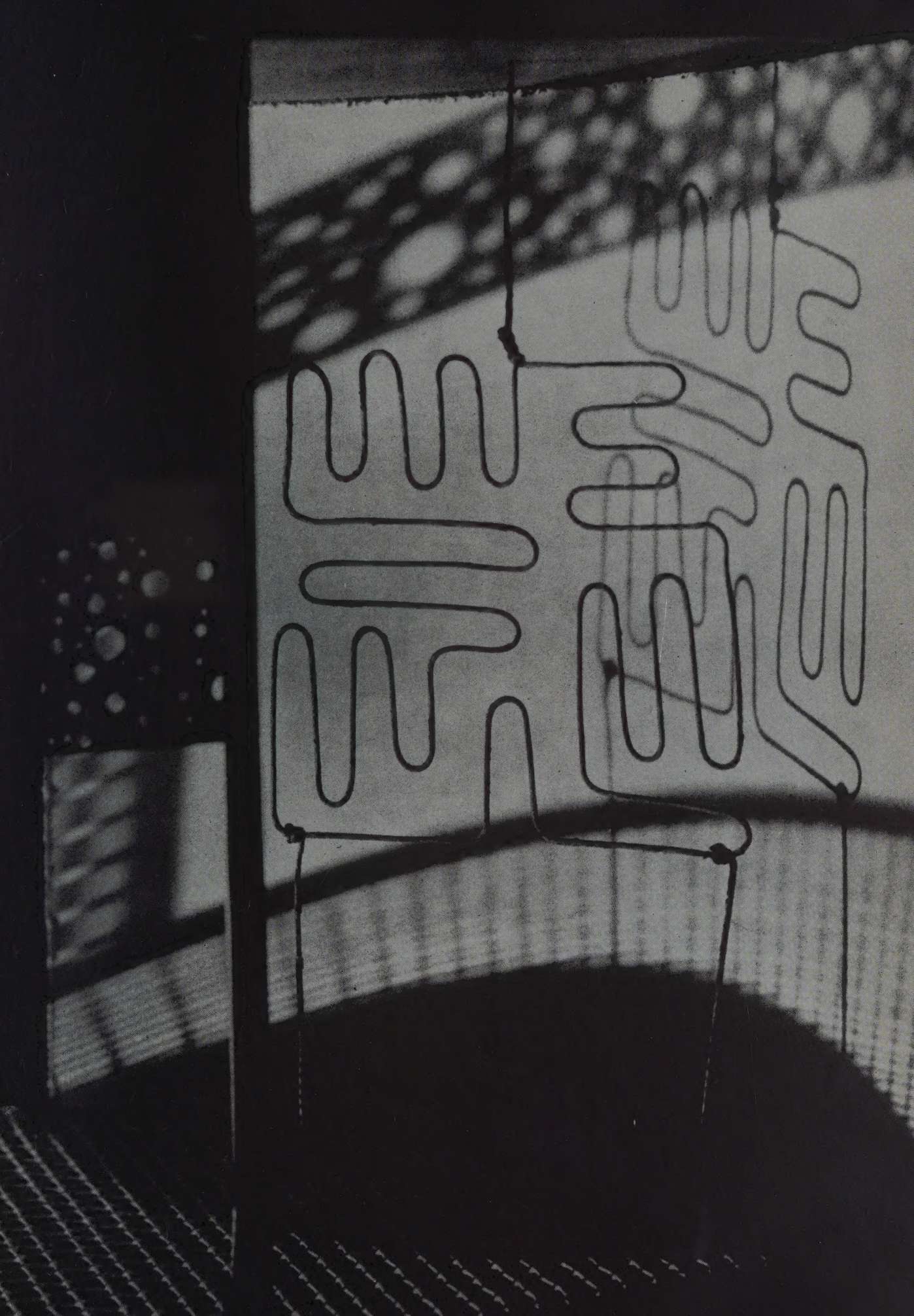
At the same time, the tendency in architectural schools to draw all matters together into the embracing subject of design actually results in unwillingness to give much attention to those that cannot be immediately integrated. Perhaps it is because architects are so concerned with composition that the notion of considering matters beyond a related context is difficult. The effect of this tendency can be both good and bad and it is a matter upon which there is likely to be lively discussion.

On the other hand, the interest in community planning which has grown up in architectural schools shows a development of the architect's urge to compose man's environment in the broadest terms. It has required a drawing together of social and physical sciences either in the area of measurement and analysis or in actual manipulation of one kind or another. Thus, in schools of architecture unique experiments in the collaboration of various university departments are occurring at a time when greater and greater specialization tends to increase isolation.

Over the past three years two schools have made experiments in integrating design training with techniques of construction by means of workshop courses at a building trades training centre. Already it seems many benefits may arise from the collaboration of the architect in training with tradesmen and material manufacturers, not the least of which are contacts with the major organizations of builders and trade unions which will lead to a greater understanding of the fellowship of building.

In all the universities architectural students are among the most spirited and dedicated. Their curriculum must have broad scope, traditional in structure yet including close contact with the sciences related to the design of buildings and admitting experimental work. It requires periodic evaluation and adjustment to meet the needs and opportunities of changing circumstances.

John Bland, Director



mcgill university

school of architecture

Our aim in this issue is to present the McGill School of Architecture – not with regard to academic divisions which are mere forms of administrative convenience, but in terms of the real life of the School: students' work, thoughts, and ideas.

One of the more abstruse and less understood aspects of the architect's training is his work with the abstracts of design: line, texture, form, pattern, colour. There is no doubt that this work is of the utmost importance and will perhaps in the last analysis, mean more to the student's growth and evolution than some of his more practical courses.

In design courses the student experiments with composition of lines, applications of colour and texture to renderings of planes in space, designing and producing three dimensional tactile structures, and the applications of visual aids in the presentation of architectural projects. Other facets may include study of light in relationship to architecture, model making for light experiments, photographic recordings, photograms, spatial arrangements of solid, linear and transparent objects.

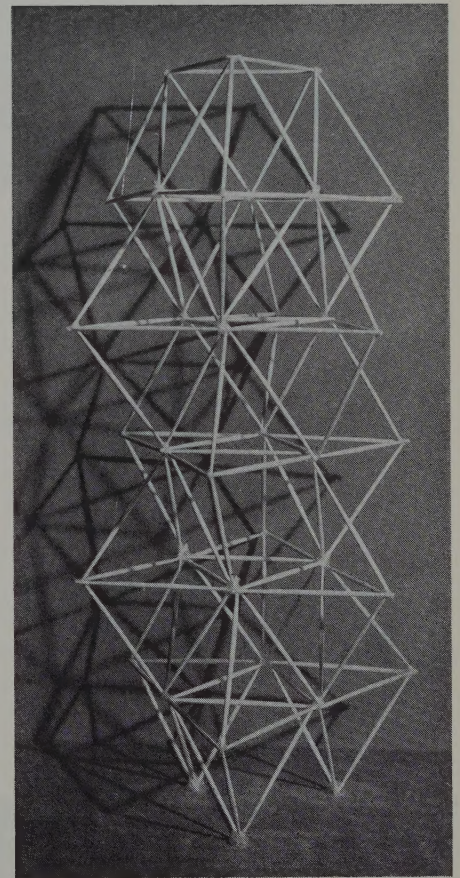
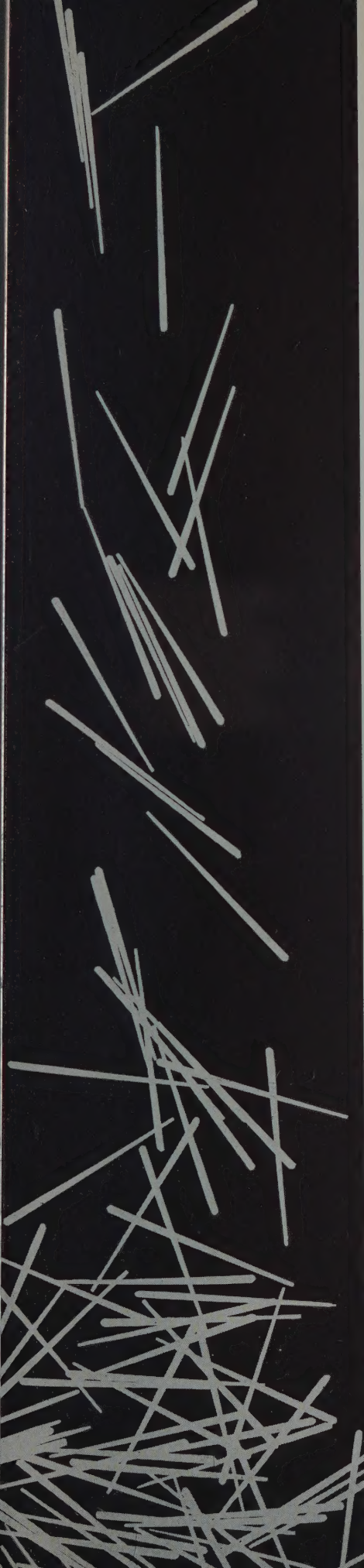
Sensitivity, a certain perceptiveness to form, shape, colour, texture is one trait that the architect must possess and one which the university must aid in developing. The architect must adopt an awareness which transcends his technical knowledge. The student must develop a desire to question himself and season those qualities of building which make for good, living architecture.

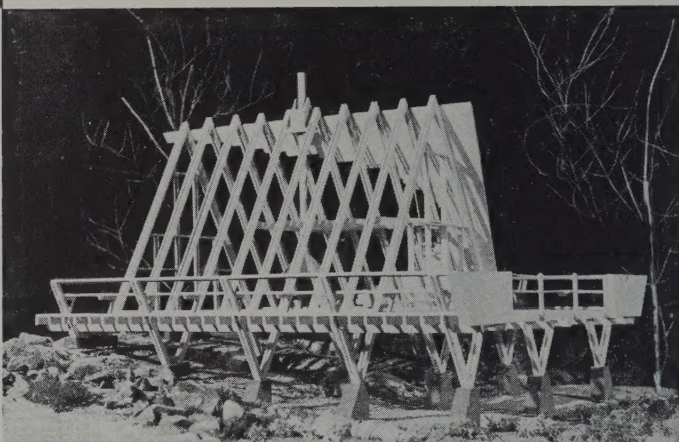
Certainly the student can be urged to follow the dicta: "less is more", "form follows function" or to read the chapters "Eyes which do not see". The point, however, is not to promote indoctrination but rather to develop introspection. The student must examine himself and give vent to his creative talents where the requirements of structure and building codes do not hold sway. The student must discipline himself to think in terms of planes and shapes, harmony and beauty. In so doing he trains his mind to think along certain lines, such as proportion, rhythm, scale. It is unlikely that this type of training can fail to influence favorably – either consciously or unconsciously – the student's design work.

The simplest element of composition —
the line.

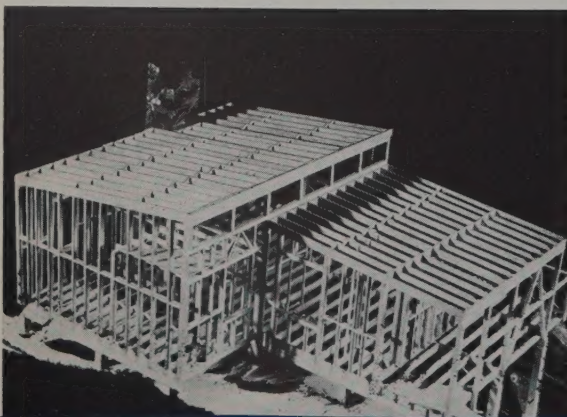
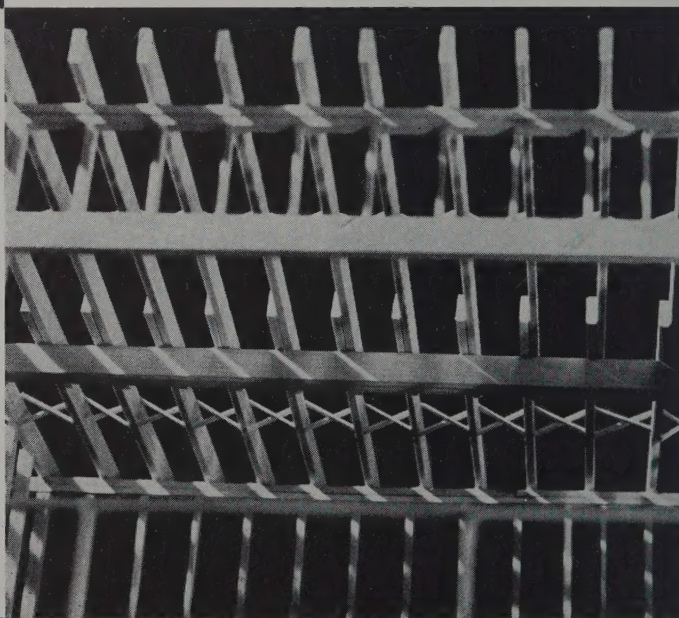
From chaos to order — the pattern of creation.

The student begins to express purpose, using
materials to fit his needs.



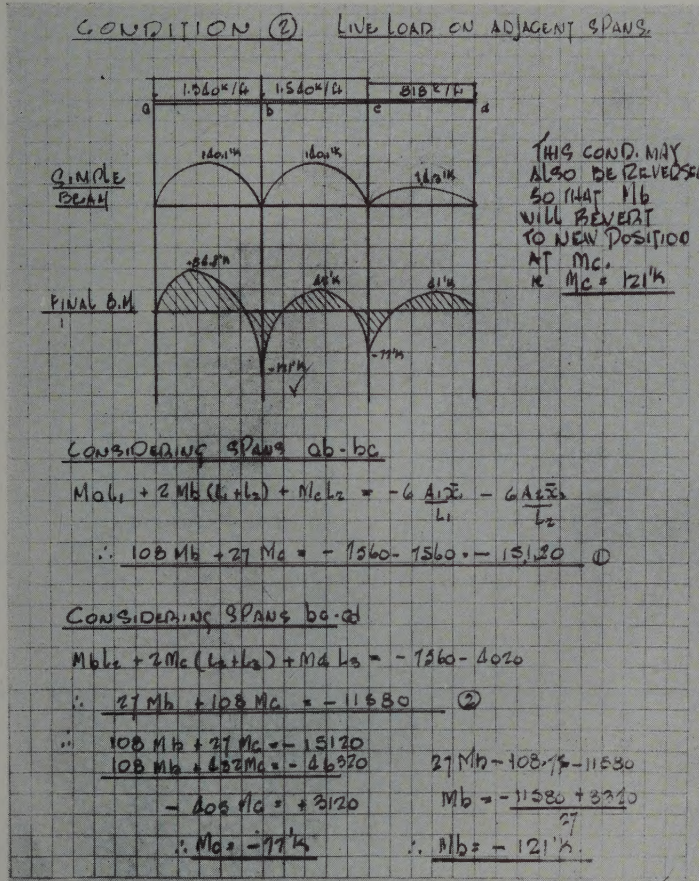


Architecture is based upon construction. Basic to all creative effort is a thorough knowledge of the materials employed.



"Well-building hath three Conditions: Commodity, Firmness, and Delight."

Sir Henry Wotton
based upon Vitruvius



"The Engineer's Aesthetic and Architecture — two things that march together and follow one from the other —

The Engineer, inspired by the law of Economy and governed by mathematical calculation, puts us in accord with universal law. He achieves harmony.

The Architect, by his arrangement of forms, realizes an order which is a pure creation of his spirit; by forms and shapes he affects our senses to an acute degree, and provokes plastic emotions; by the relationships which he creates he wakes in us profound echoes, he gives us the measure of an order which we feel to be in accordance with that of our world, he determines the various movements of our heart and of our understanding; it is then that we experience the sense of beauty."

Le Corbusier

From the theoretical manipulation of materials, the students move into actual contact and handling of building materials used in every-day construction by their work at the Building Trades Apprenticeship Center . . .



**building
trades
apprenticeship
training
center**



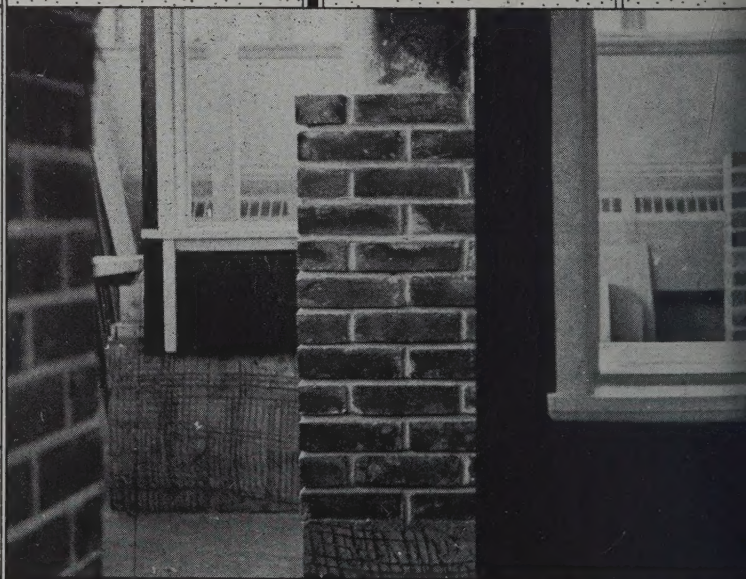
In lower years, the Center serves to illustrate standard elementary details of wood and masonry construction, and familiarizes students with characteristics of common materials.

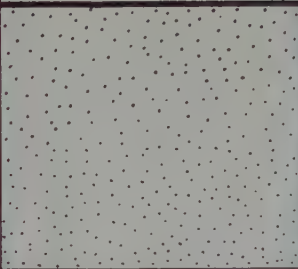
In senior years, it teaches to develop an idea in successive stages and points out that an architect's detail — straight off the drawing board — is often not complete or even adequate. The detail which appears satisfactory on paper may actually be very difficult to construct, or too involved and costly.

Less drawing — more building tests.

The Trade Center: a new construction laboratory — the first of its kind in Canada, and one of the few in any university anywhere.

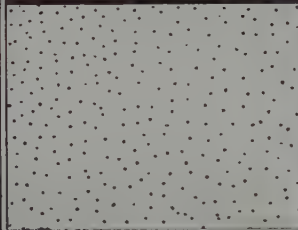
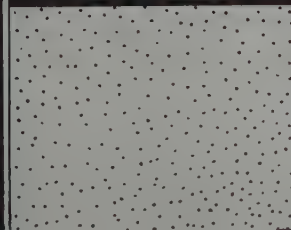
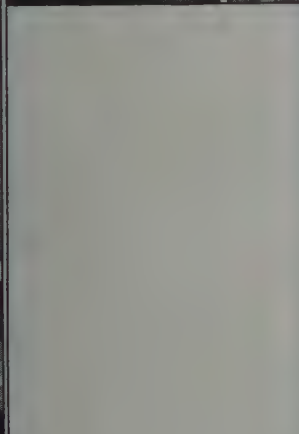
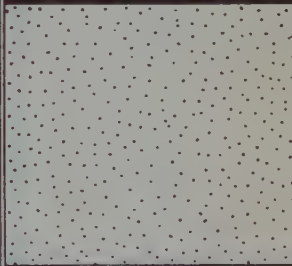
It complements usual design courses and teaches new techniques of design.





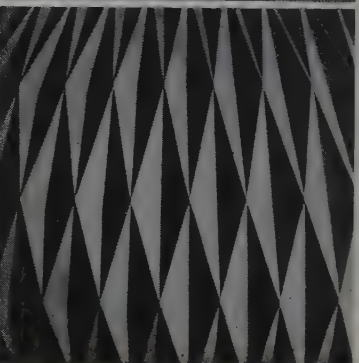
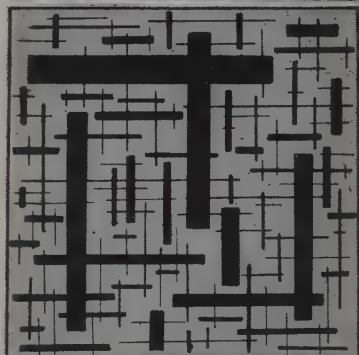
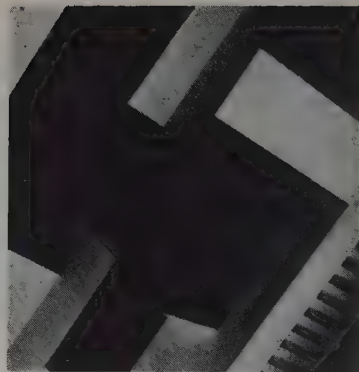
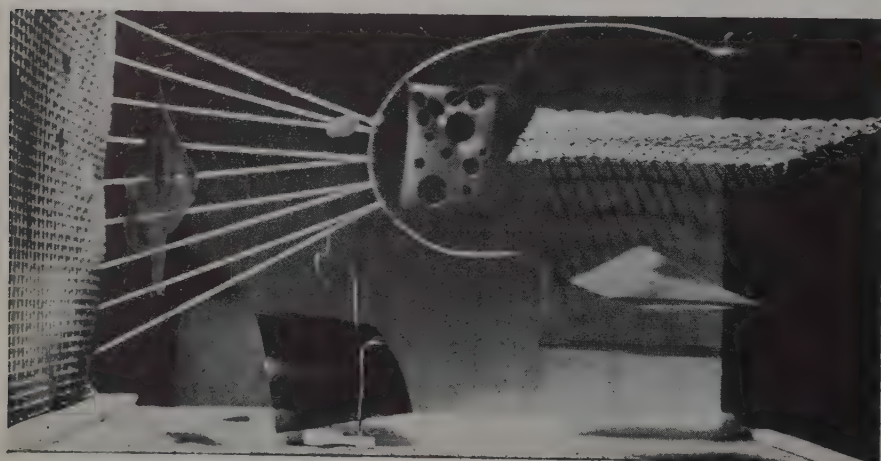
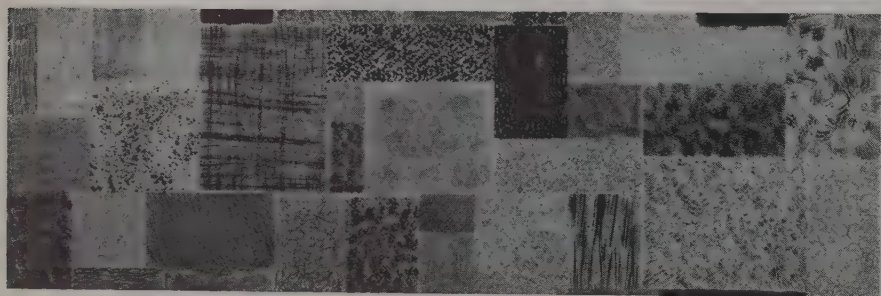
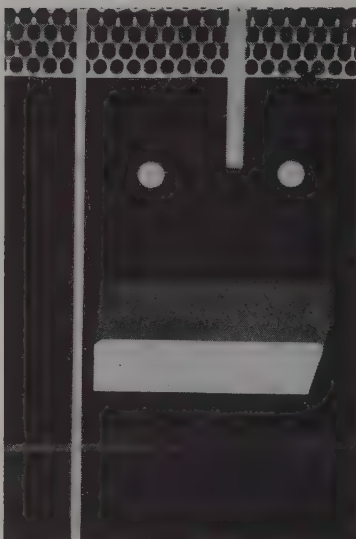
Students working at the Center are supervised and criticized by specialists involved in the production of buildings. This results in successive attempts to improve details of construction.

The needs the Center is attempting to fulfil are: to equip a laboratory for post-graduate studies in building assemblies; to further industrialize building techniques, particularly in housing; to impress upon students the necessity for research and building studies; to promote cooperative efforts by designers, builders, and manufacturers in studies of building assembly—in short, to promote studies in building integration.



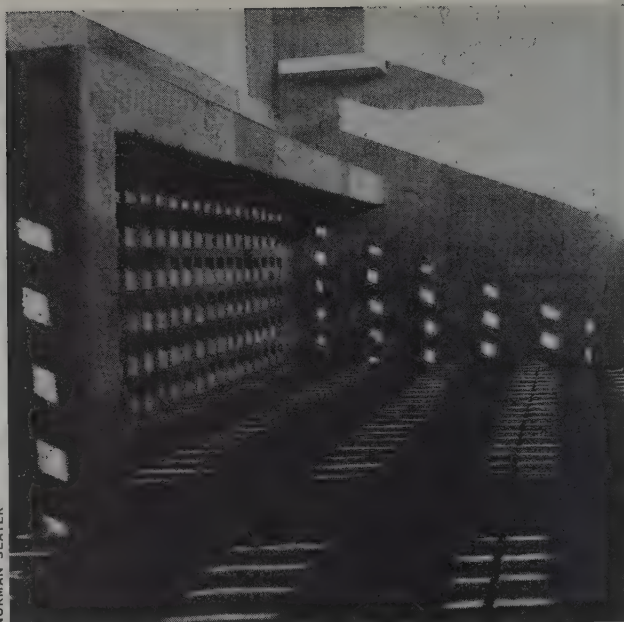


Sensitivity, a certain perceptiveness to form, shape, colour, texture, is one trait that the architect must possess and one which the university must aid in developing.



"Architecture is the wise, correct, and magnificent play of forms under the light."

Le Corbusier



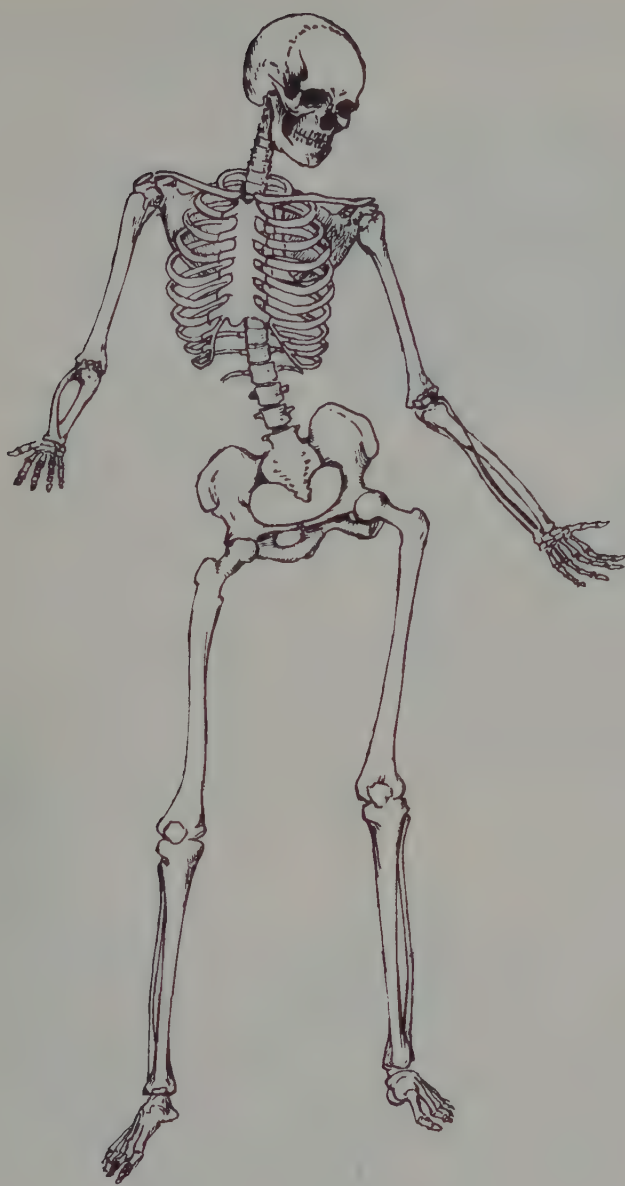
NORMAN SLATER

left: student abstraction

above: actual building . . .
(Le Corbusier's Unité d'Habitation)

At sketching school in the fall and life drawing classes during the year, various techniques and media of expression are used.





our uncanny school building

The School, — this hermetic refuge, this concrete irrationality, this “exquisite corpse”, lies low in a damp dingle, close by an old creek, which ran to the east of the ancient village of Hochelaga. In the olden days the little Indian boys came nearby to make mudpies and, later, it is said, youths were taught to build hunting camps.

Many hunting moons later, in the Victorian period, a Gothic residence with turrets and scalloping was built on University Street.



It passed through many vicissitudes — evil days descended on it.

Finally, it became a School of Architecture. From this building with its irrationally formed roof and its secret nooks and crannies went forth the teachings of the new Architectural Fundamentalism. A hard doctrine had found a soft refuge.

The slowly accreted deposits of past memories and moods which impregnated the walls lay dormant, and through the many rooms of the old Victorian mansion new currents flowed.

The owls in the attic still sat and blinked in the awful gloom, and the pigeons, taking special advantage of the qualities of the old building, nested under the eaves and strutted along the band courses.

But elsewhere on the premises nothing was the same.

In the lowest recesses, the dungeon was still a dark room. Prisoners were no longer kept chained here, it had been converted to the ecstasies of the light experimenter and the photographer.

Each of the rooms above had its little clubs of architecturally ardent young men and women, banded together to create useful and beautiful forms in space. Strange signs appeared “Jo-jo slept here”. Cat-calls and shrieks sometimes pierce the silence in which the legendary pin could be dropped. Radio-music unsuitably blended, created milder cacophonies.

In the basement, the common room went through a periodical face-lifting to express the latest and coolest look. Lewis Mumford was suitably entertained here, sitting, none too comfortably, in low, — very low, divans amidst an elegant colour scheme.

Philip Johnson, too, “the glass box virtuoso”, squatted here, legs akimbo, and dazzled all by his energetic wit. Said Johnson, “Here in this School, cut up as it is into so many odd rooms, and where students are brought nose to nose with instructors, a greater sympathy and comprehension should develop between the student and his teacher”.

Perhaps this was insincere flattery, said with tongue in cheek.

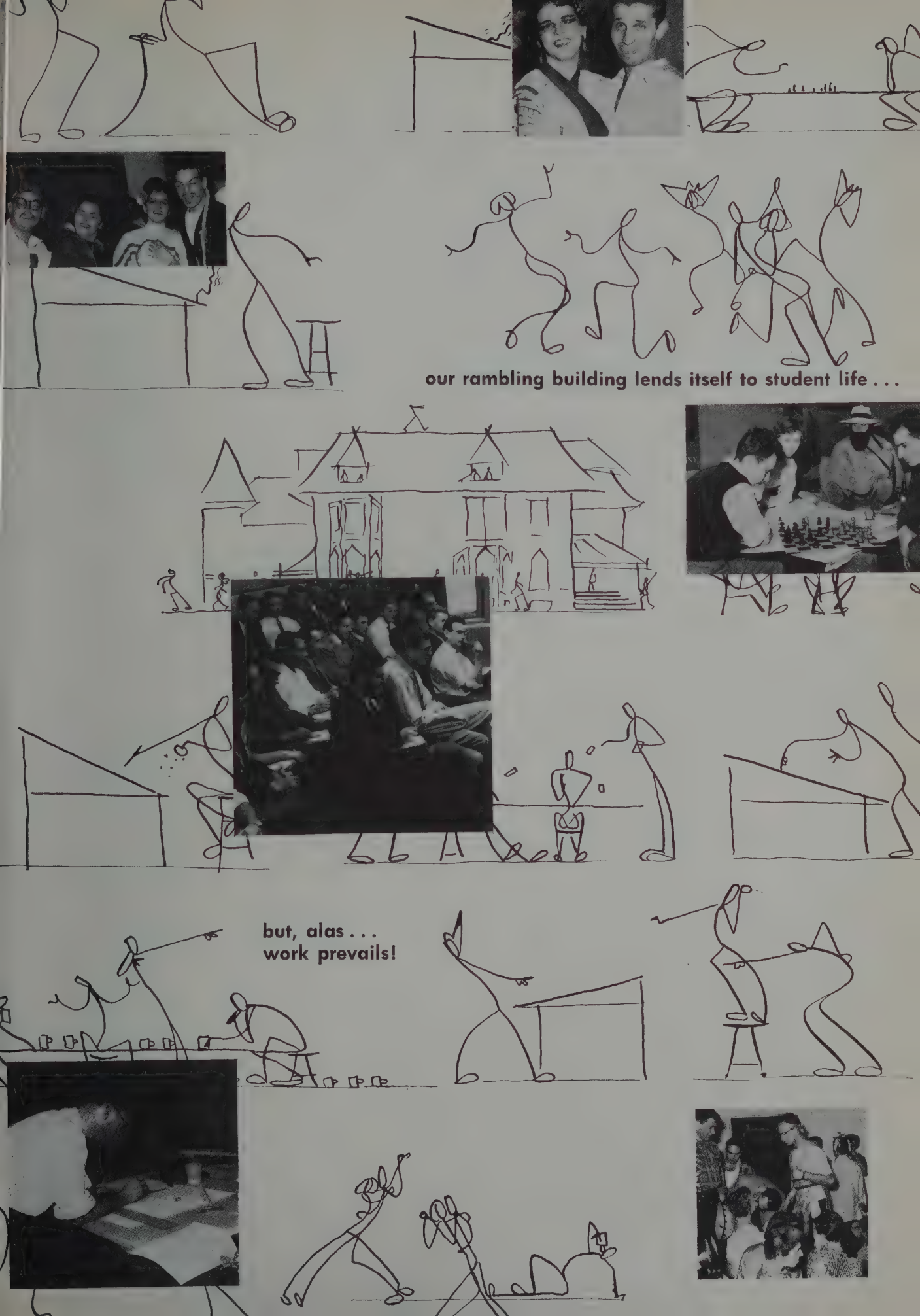
Be that as it may, there is a tremendous contrast between our cubby-hole system and the hall-drafting-room — the large drafting room with the can hanging on a string in the corner, which everyone strikes on leaving.

Or contrast it with the new school by Mies van der Rohe, who, incidentally, never visited the School and who really ought to, being spiritual father to a large family within the School.

Contrast the great new space chastely enclosed in glass, steel, and brick; contrast the control, the balance, the elegant precision with the shaggy, moody, erratically arranged spaces of our University Street building. Should we then say that our school-building is dated? Yes. Should we feel that its character is merely negative? No.

We have proven that a brave new world can be created within the old bones of past days.





our rambling building lends itself to student life ...

but, alas ...
work prevails!

a variety of projects are tackled by the students...

e

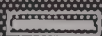
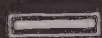
exhibition stand

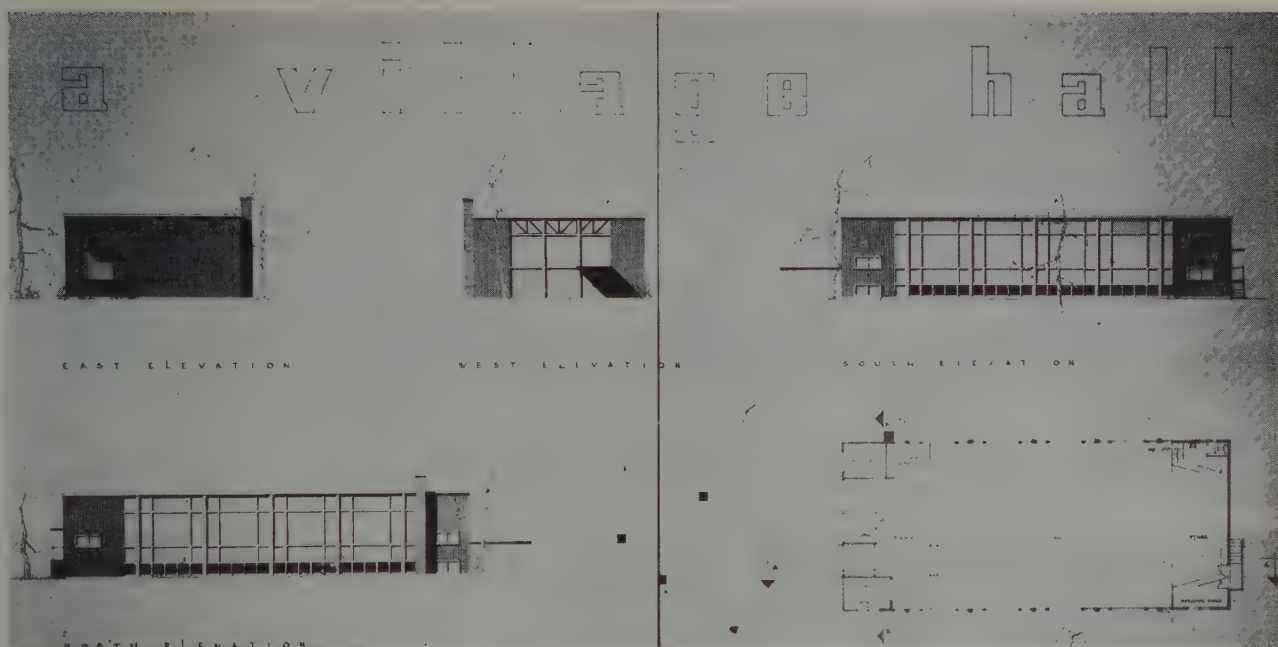
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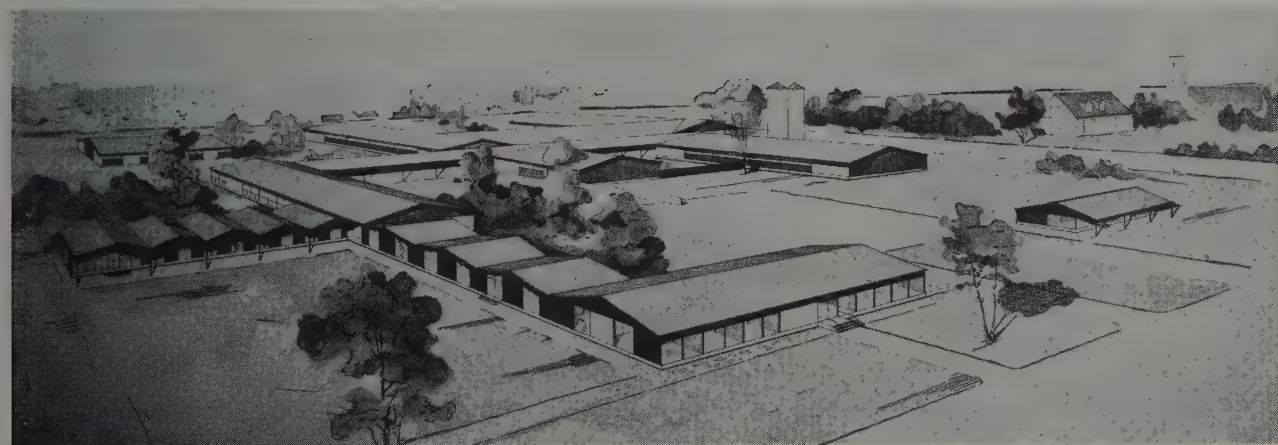




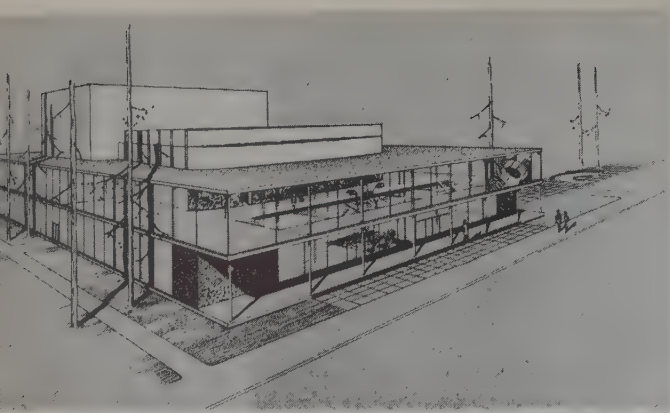
a village hall



a suburban house



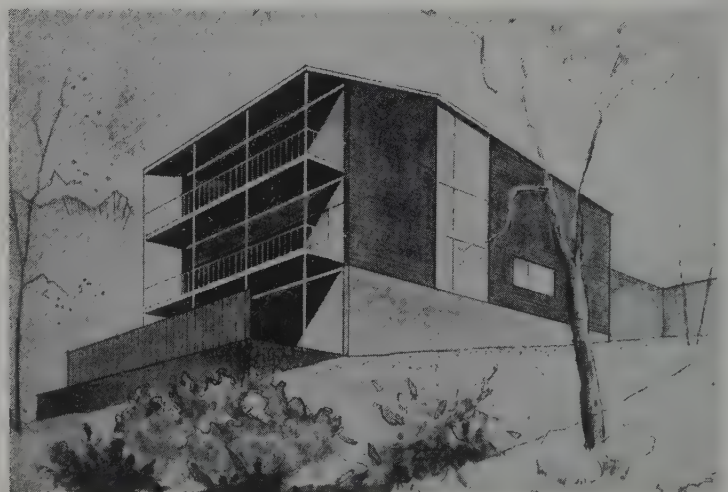
a county animal hospital



top: a community theater
center: a chapel interior
bottom: a living room



top: a mall type shopping center
bottom: a hillside house



At times imagination is given a looser rein in a one-day time sketch such as "A Modest Proposal" . . .

McGill School of Architecture
Session 1955-56

Sketch Design
November 4th

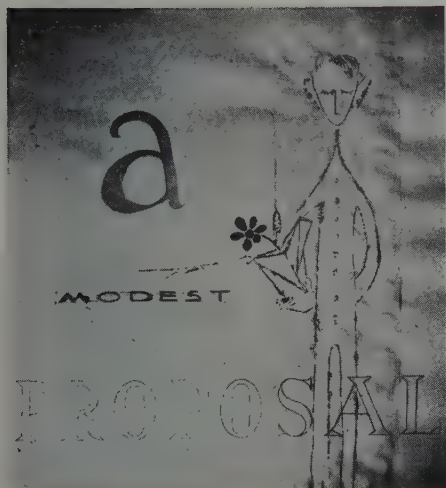
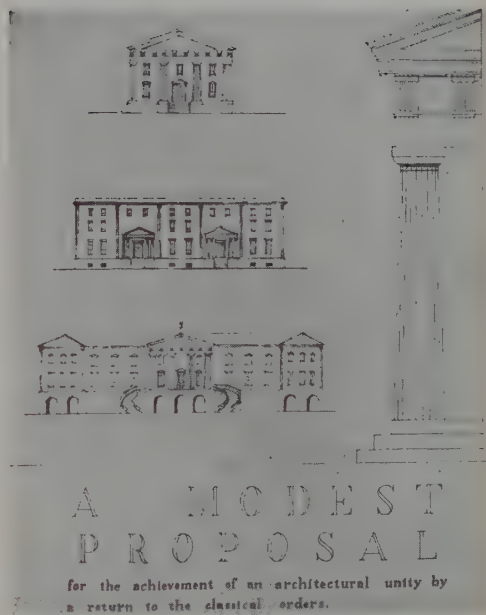
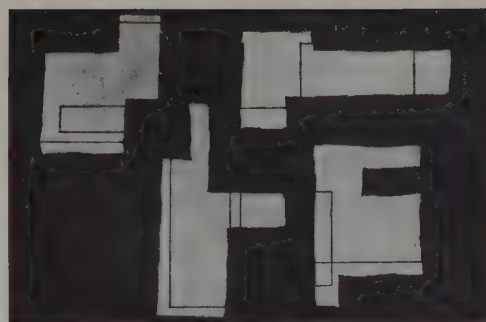
"A MODEST PROPOSAL"

Jonathan Swift in the year 1729 presented to the people of England his "Modest Proposal". Now you are being afforded an opportunity to present a different kind of "modest proposal" of your own imaginative idea to our architectural community.

It is possible that some time during the years of your subjection to the discipline of the School of Architecture, you conjured some dream or resolved to give expression to some yearning on a subject of architectural interest. It would be true, would it not, that each of us has a concept of lyrical architectural form, be it a house, a theater, a palace, a street, a city, even an abstraction. So vivid are these concepts that in fact for most of us they are realities to be pleaded for, to be given form if providence is kind.

You are expected to present a sketch-essay embodying your idea or aspiration in fulfilment of the requirements of this problem using media of creativity at your disposal.

Handing-in-time: 5:30 p.m.



tempers on the Nile

A one-act play suitable for production in Schools of Architecture. No permission required from author for performance of play.

Scene: A construction shack along the Nile, through the window can be seen the base of the pyramid of Cheops. The slave swing-shift has just begun. The slaves are pulling blocks of stone up an inclined plane and chanting softly "Ol' Man River". To the left of the window, above a counter piled with salesmen's samples, can be seen Cleopatra in a cheesecake pose on a calendar with the date Aug. 30, 2955 B.C. circled in red. Seated around a table are the architect, the contractor, and Pharaoh's high priest. Obviously the construction of the pyramid is not going along as well as it should.

Priest: (Stroking cat) This pyramid must be finished by the end of the month. Banister-Fletcher is giving it a six page spread with coloured photos.

Contractor: We're doing the best we can under the circumstances. The slave unions will not allow a man to pull more than three and a half tons and they've reduced our whips to a cat-o-seven tails. Before you know it they will want two coffee breaks.

(Enter junior draughtsman with coffee and sandwiches)

Architect: (Adjusts necklace; picks up sandwich and takes a bite; sighs) Oh, to be a carefree junior draughtsman again. (To junior draughtsman) Tell me boy — are you learning much in my office? I know that you just graduated, but if you keep your eyes open you'll soon become head reed sharpener.

Contractor: (Interrupts impatiently) I need more slaves. De Mille is coming out here on location next week and . . .

Architect: Not another spectacle! I remember the last time he was out here filming "The Ten Commandments".

Nobody worked for days. I'll not allow him on the site.

Contractor: You've given me nothing but trouble since we started this job.

Architect: Not at all. If you had just followed my specifications (gestures hopelessly). I have never seen such shoddy workmanship in all my life. If I had my way, you'd start this job again. Why, you could push a papyrus between the joints.

Priest: If you had your way, Pharaoh would be sleeping in a crystal box under a papyrus cover.

Architect: This is a modern age. We shouldn't slow ourselves up with antiquities.

Contractor: This is no time to propound theories.

Priest: That's right. What are you going to do about finishing the job? Pharaoh has set the dead-line for the end of the month.

(Enter slavemaster wearing loin cloth, pith helmet and dark glasses; cat-o-seven tails in left hand)

Slavemaster: (Pushing back helmet and mopping brow) Sorry I'm late, but three more slaves just quit and I had to return their unemployment insurance books.

Contractor: There's your answer. We have a slave problem, and a weather problem, too. The Nile flooded a month ago and the slaves just won't work in more than six inches of water. Worse yet, some slaves are lotus-eaters.

Architect: You contracted to finish the job in plenty of time. The end is not yet in sight and you're two months behind already.

Contractor: But the slaves and the will of the gods are unpredictable factors.

Slavemaster: The boss is right. We just can't do anything about it.

Priest: (To architect and contractor) All I can say is that if that pyramid isn't finished by the end of the month, your next offices will be in there when it is finished.

Contractor: (Prostrating himself) We'll do the best we can.

Junior Draughtsman: (To slavemaster) Would you like a sandwich and a cup of coffee, sir?

Slavemaster: No. After stoving over a hot slave all day, I'm going home for a warm meal.

(Exeunt; Priest, cat, contractor, slavemaster and junior draughtsman, leaving architect sitting at the table with head in hand.)

CURTAIN.

"History is chiefly of value in so far as we can learn from it anything that will help us to shape the future better."

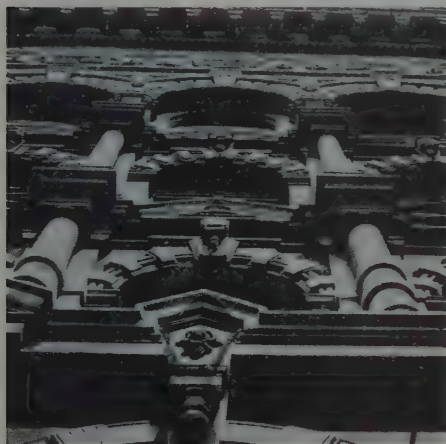
Thomas Sharp



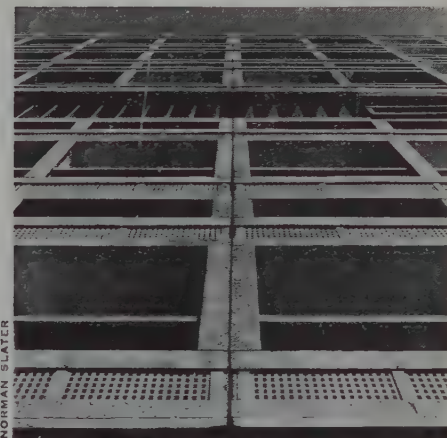
nineteenth century row house in montreal



*twentieth century equivalent . . .
is this progress?*



nineteenth century façade in montreal



*twentieth century equivalent in marseilles . . .
this is progress!*

below: row housing project by student



Old and new, past and present are sources of the future — the future which is a constant puzzle to us.

Can we learn from these sources and gain a better understanding of times to come?

Can we search for buds and tell what the flower is going to be?

Or are we walking in a dark alley where only sudden flashes of light reveal what is ahead of us? Although the accidental has its function in determining future developments, it certainly is not the governing factor. Only by accepting this can we go ahead and study our history books and look around in our present world with a critical and searching mind, expecting that all we see and study "will help us to shape the future better".

The work shown on the following two pages is taken from research done by students as part of a course of study recently introduced in the School on *Architecture In Canada*.

The beginnings of present day skeleton construction are found in the cast iron façades of 19th century Montreal buildings. Such buildings sprang up in many American and British cities in the latter half of the 19th century.

The reasons for the popularity of the use of cast iron were its cheapness, its fire-resistant qualities, its resistance to corrosion, its durability, its great strength in compression, and the fact that it could be easily cast into almost any desired form.

The latter feature of the material led to its considerable misuse. There is always a tendency to carry over old forms into situations that demand new forms, and a tractable material such as cast iron has not much defence against such abuse.



above: three-storey building at 43-53 Notre Dame Street West, probably built in 1850.



left: detail of façade of three-storey building at 639-643 St. James Street West, built about 1890.



left: fashion shop by Vincent Rother in office building by same architect, on Peel Street, 1950.

center: office building at intersection of Van Horne Avenue and Cote des Neiges by Vincent Rother, 1952.

bottom: apartment house "Four Winds", Cote des Neiges, by Philip Goodfellow, 1954.

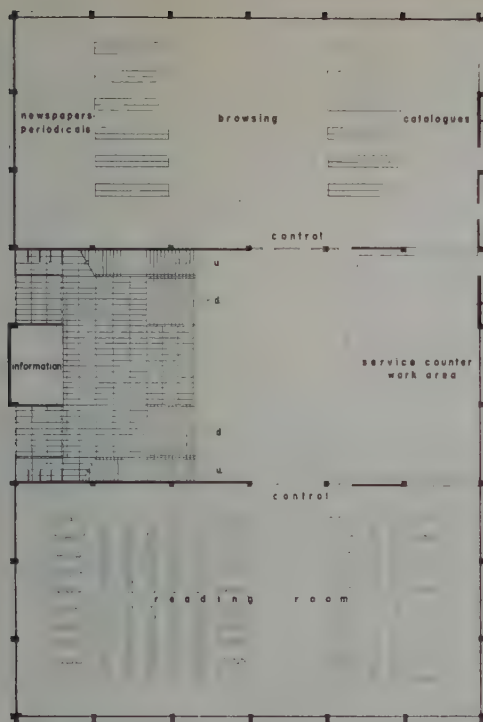
The cast iron façades marked the beginning of a development which resulted in one of the basic structural and aesthetic conceptions of contemporary architecture: skeleton structure.

One of the buildings represented here, illustrates the manner of approach based upon the honest expression of the structural skeleton.

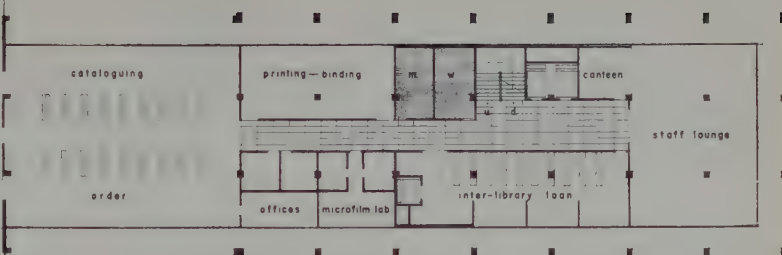
Others also indicate a clear conception, some refinements, and good use of forms in harmony with the goals that modern architecture has set itself. This category of buildings represents the healthiest aspect of current architectural design in Montreal. It does not pretend to pioneer new forms and ideas, but undoubtedly pursues the right way of approach in design, the one that belongs to our times.

A continued healthy development along this path will undoubtedly bring us to a further stage when writing about architecture in Canada, one will be justified to use the term *Canadian Architecture*.





plan of main floor



detail of façade



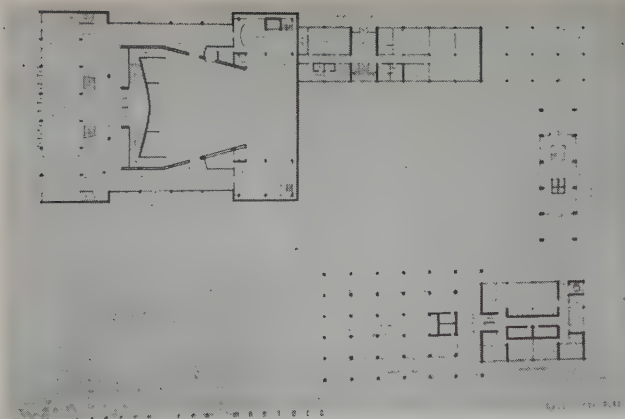
aerial view of model

public library for city of montreal

The library is divided into two blocks: one low block containing the reading rooms and other public areas, and a tall windowless block comprising the stacks. Connecting these blocks and extending under the stacks is the administrative area.

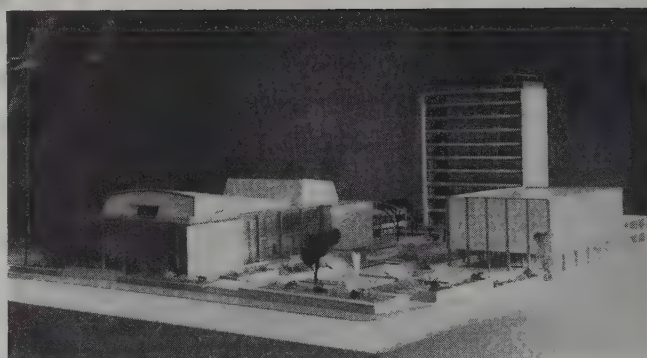
montreal's present municipal library





above: main floor plan

right: model showing theater at left



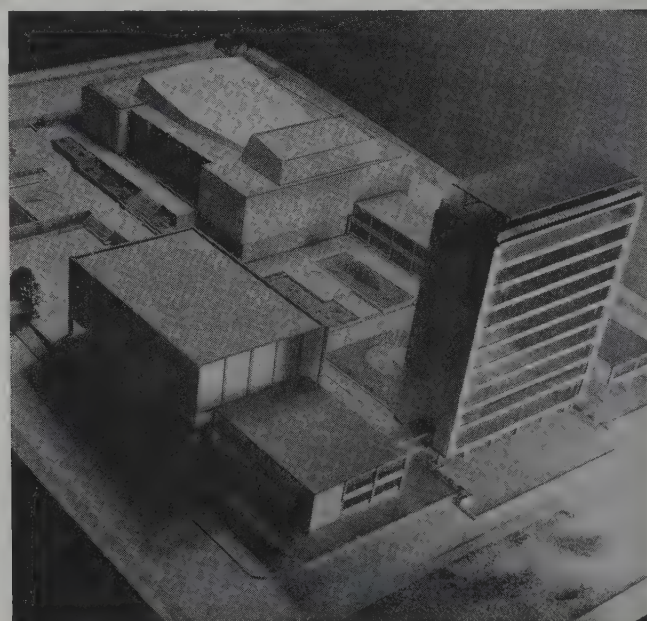
an art center for montreal

An ambitious project including many facilities: a large theater seating over 900, a smaller concert hall with attached music studios, a tall, vertical administration block, and a long, low block containing rooms for the visual arts.



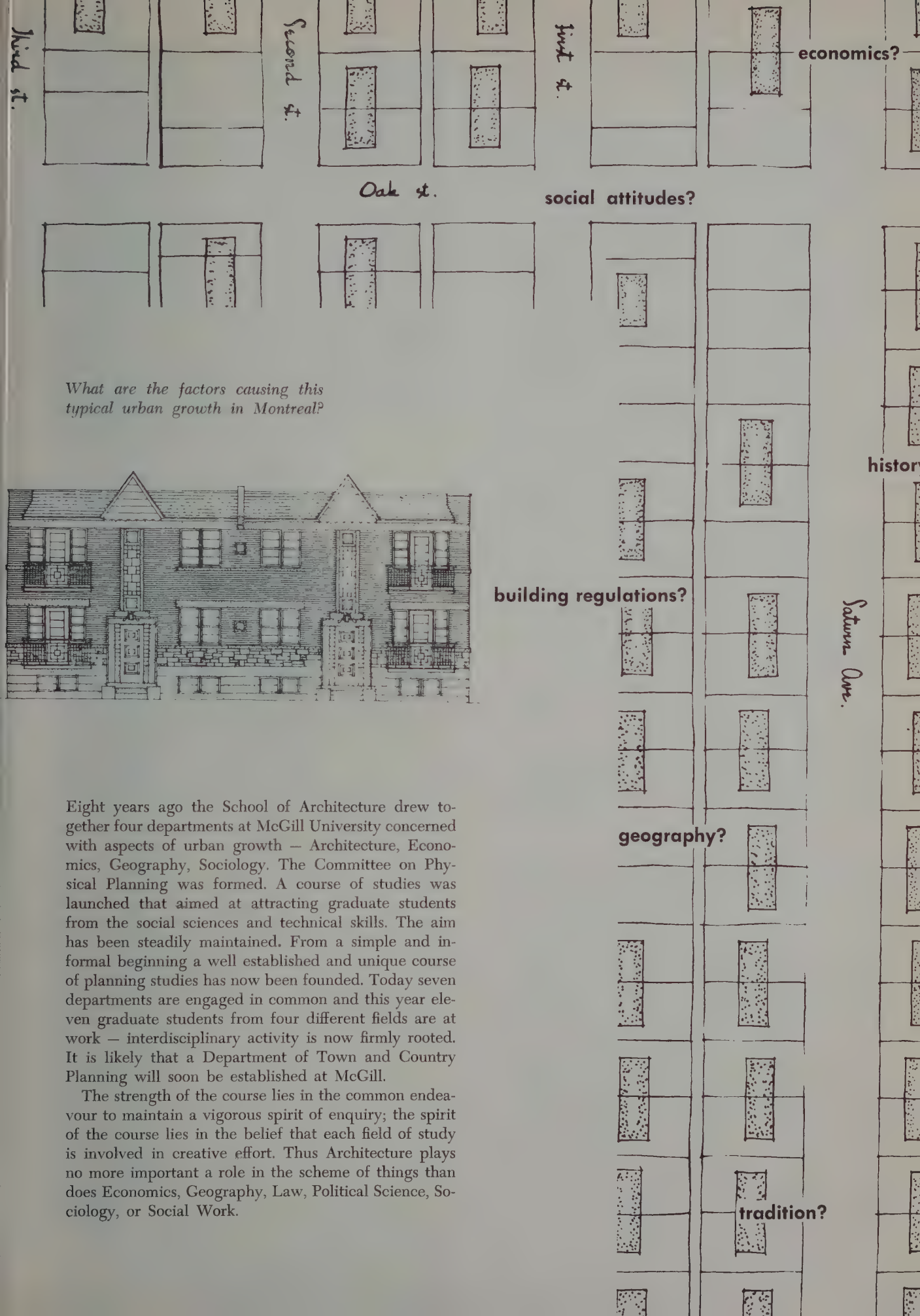
above: second floor plan

right: aerial view of model with concert hall in right foreground



the montreal museum of fine arts





What are the factors causing this typical urban growth in Montreal?

Eight years ago the School of Architecture drew together four departments at McGill University concerned with aspects of urban growth — Architecture, Economics, Geography, Sociology. The Committee on Physical Planning was formed. A course of studies was launched that aimed at attracting graduate students from the social sciences and technical skills. The aim has been steadily maintained. From a simple and informal beginning a well established and unique course of planning studies has now been founded. Today seven departments are engaged in common and this year eleven graduate students from four different fields are at work — interdisciplinary activity is now firmly rooted. It is likely that a Department of Town and Country Planning will soon be established at McGill.

The strength of the course lies in the common endeavour to maintain a vigorous spirit of enquiry; the spirit of the course lies in the belief that each field of study is involved in creative effort. Thus Architecture plays no more important a role in the scheme of things than does Economics, Geography, Law, Political Science, Sociology, or Social Work.

O GOD! O MONTREAL!

Dear Natasha,

I arrived in Montreal last week and I am writing you already. You remember even when I was younger I had dreams of going to live in a big city. So as soon as I arrived in Montreal I felt my dream has come true.

My train came in in the evening, so all I could see was ocean of lights, bright colours and beautiful shining cross on top of mountain. But first surprise came to me when my taxi turned in small street where my friend lives. Ghostly looking houses (that is what you call them in Montreal, but we at home call shacks), with stairs coming from every floor, squeezed together as sandwiches, surprised me. But I contributed it to the long voyage and fatigue.



First of all I was overwhelmed by all sorts of noises. Noises that you could hear day and night; sirens, banging doors, blow of steam pile driver, and all the domestical noises from neighbors. It happened so that just above our head was living a young genius, who practiced "modern" music. Below was living a meloncolic young woman, who liked to play soft music -- piano. Left, a family with four children, right, a very nice couple that seemed to disagree on every item in the life, and was not ashamed to say so, and when I say "say so" I mean you could hear it. Right across the charming little "patio", that I am going to describe later, lived a family that liked nice "quiet" social gatherings, and when I say "quiet" I mean that you could actually feel that you are one of the guests.



My friends so called five-room apartment has one and one half window! It has two doors; front and back or fire escape door. Well, I don't know how you could escape in case of emergency or fire through the back door and stairs. The patio that I already mentioned before, is sort of garbage place for all people living around. Is surrounded by greyish dirty walls and back "terraces". Once I took the back stairs and taking infinite precautions twisted my ankle. I guess I was rather lucky, for the charming, always arguing lady, from next door, told me that last winter she broke her wrist while trying to use her stairs. It seems to me that in winter they are always covered with snow and ice.



All of a sudden I felt my small little town with wide open spaces was so good!

Love, Vera





Stowed away in a Montreal lumber room
The Discobolus standeth and turneth his face to the wall;
Dusty, cobweb-covered, maimed and set at naught,
Beauty crieth in an attic and no man regardeth:

O God! O Montreal!

"The Discobolus is put here because he is vulgar —
He has neither vest nor pants with which to cover his limbs;
I, Sir, am a person of most respectable connections —
My brother-in-law is haberdasher to Mr. Spurgeon."

O God! O Montreal!

Samuel Butler — "A Psalm of Montreal", 1875 — written
after a visit to the Montreal Museum of Natural History
where he found a plaster cast of the Discobolus hidden in a
store room.

January 1940 — The Architectural Faculty at McGill has gone co-ed! For the first time in history women students are now at work in the draughting room on the second floor of the Engineering Building. Like the Political Economy Club, the Architectural Faculty and the Engineering Building generally have withstood the assault of co-eds, athirst for technical knowledge. Now even that stronghold has fallen and the agenda for the next meeting of the Political Economy Club has tabled a motion permitting the presence of women students at its meetings. Although there will probably be severe repercussions when Catherine Chard and Arlene Scott attempt to crash the architectural profession they are confident that some form of architectural work will be available for them upon graduation.

There are always some offices where tea is required in the afternoon.

Putting on the dog?

May 1944 — Mrs. Arlene Scott Holland, who was the first woman to register at the School of Architecture, last month not only received her Bachelor of Architecture degree, but also walked away with a special prize for the highest standing in the final year.

She was wearing her high heels.

February 1946 — In reference to one of his female students the director of the school said, "She has done as well as any of my male students, I think she has a real career in front of her".

March 1940 — Last night the recently retired Director of the School, officially opened the new architectural exhibition room, "Focus". The exhibition room is truly a colour masterpiece. Orange and green radiators, yellow and blue ventilator ducts, and a very interesting wall colour scheme of blue, red, and green give the room a friendly feeling.

Where is the door, please?

October 1941 — This year the School opened with a bang! Four more co-eds than last year were admitted to the Faculty. The Engineers, who hitherto had disregarded the Architects, suddenly seem to take a sincere interest in the School, and their visits become more and more frequent . . . and above all, very bothersome.

The Engineers also have designs . . .

February 1942 — The Architectural Society will present the third in a series of educational films on Monday afternoon at 5:15. The film will be complete with sound effects . . .

But suppose the organ breaks down?

October 1942 — A new organization was inadvertently formed on the campus these last few days, namely, the Society for Prevention of Cruelty to Architects, more popularly known as the S. P. C. A. This situation was brought about when the Architectural Frosh were politely but firmly requested to arrange some sort of entertainment on Thursday night for their superiors . . .

October 1947 — The architects have a new home. After leaving the Engineering building because of its cramped quarters, the School of Architecture has moved to 3484 University Street.

Once upon a time Engineers and Architects lived together . . .

March 1955 — We regret to announce the discontinuance of this column. Our faithful reporter has resigned to accept a position with "The Canadian Architect".



half of the truth . . .

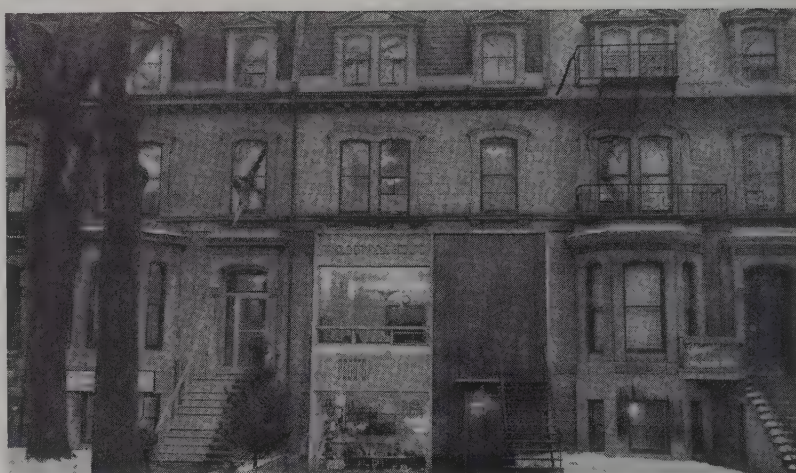


. . . and the other half!

The unprejudiced camera . . .



dream . . .



reality . . .

e d i t o r i a l b o a r d

stephen bleyer
carl charlap
jean e. guy
stig harvor
daniel moss

elisabeth murray
christine a. poznanska
jacques reeves
nathan schertzer
sigmund a. stefaniszyn
harvey wolfe

photography
jean c. martineau

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gordon webber
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James A. Murray

WHEN I ATTEND A MUSICAL RECITAL, a concert, a ballet, I inevitably see in the audience a representative sprinkling of Vitruvian faces, relaxed contemplative countenances quite at variance with the normal harassed aspect of these noble Romans as they move from crisis to crisis in the forum of daily events. This pleasant vision reminds me of the extraordinary degree to which the architects as a whole bring their interest, appreciation, need and frequently their love to music. The phenomenon is a personal expression of the close relationship in the arts of music and architecture.

I propose this evening to explore briefly with you the nature and significance to our art of this close correspondence. I believe that any consideration of the essential unity of the arts is necessary to a full creativity within our particular art. In a world where a proud specialized science and a bankrupt philosophy of living have brought us to the hellish brink of atomic disintegration, the need for integration and philosophy is everywhere necessary. This need in the arts is but a particular manifestation of a general problem.

In the dangerous drift of modern architecture towards technical sterility and emotional incompetence this brief glance at aesthetic philosophy can do no harm. While exploring relationships between music and architecture, this paper is limited to consideration of aesthetic rather than technical phenomena. The musical world is viewed from an architectural position. The paper is further bounded by my limited lay knowledge of music coupled with an unlimited enjoyment which is, I must admit, a dangerous viewpoint for aesthetic dogmatism. Against this shaky background let us explore parallels between the Morris dance and the dance of Morris, between the Bachs, Johann Sebastian and Michael, between the Mendelsohns, Eric and Felix, between Schuman and Shulman.

In exploring this matter the problems of semantics arise and it becomes difficult to talk on architecture (seeing) or music (hearing) in terms of equivalent meaning to both subjects. It is facile and fashionable to apply to one art the qualities and criticisms appropriate to another . . . this type of fuzzy pretention delights in such phrases as "the melodic line of the novel".

It is here necessary to essay some definition of art before commenting generally on the relationship between the arts of music and architecture. Definition of 'art' has occupied philosophers, aestheticians, architects and even on occasion mayors, for some two thousand years and I don't suppose I will answer it here and now. But we might argue that the origin of a work of art is creative, interpretive thought. Thus the most beautiful works of nature are not 'works of art'. The essence of the work of art is the thought, expression, even spiritual force which the artist feels compelled to communicate to his audience, be it God, fellow man or himself and it is something beyond the purely functional. It is above all creative not imitative. It is personal in its origin and universal in its expression. Within it is something of I — who created it and they — people, things or ideas on whom it comments, and we the individual or the

society who first of all nurture its development and who finally are moved by it. The arts of music and architecture are with other arts of this kind. The 'beauty' of an art work varies from mind to mind, from age to age, from culture to culture. This indefinite 'beauty' is however often the quality upon which a work is accepted or rejected by a generation, as a work of art.

Historians usually attribute the recognition of the correspondence between music and architecture to Frederick Schlegel "music is architecture in a fluid state and architecture is frozen music". Schilling called architecture "music in space". In the 18th Century, John Brownne said that "the object of music is to unite beauty and expression, as the object of architecture is to unite beauty and utility". The German philosopher Schopenhauer has asserted that "all Arts aspire to the conditions of Music". F.L.W. relates that in his childhood he had learned to look upon a symphony as an edifice in sound. These men would approve the subject if not the material of this paper.

Architecture and music have more in common than painting and music. The common denominator is their very abstractness. Painting and literature are seldom abstract. The preoccupation of modern painting with the abstract, as a revulsion to insipid representational art and the advent of the camera, has too often departed from social significance to become naught but exercise in the individual visual training of the artist — an art of dubious durability. The most important development of modern painting returns to interpretive representation and comment and description. In most instances painting and literature comment on events and feelings of life in the past, the present and the future. Architecture and music are never purely descriptive — Richard Strauss convincingly imitates bleating sheep in *Don Quixote* and Handel wrote of the Cuckoo and the Nightingale with life-like representations — and need I mention Rimsky-Korsakoff's *Flight of the Bumble Bee*; but these are in the realm of tricks and whimsy — on a par with the Perma-stone tree published in our *Journal's* O Canada column. However, Music and Architecture may be suggestive — one would hardly recognize the gates of Kiev from Mousorgsky's *Pictures at an Exhibition* — or the City of London from Elgar's tone poem — or Fingal's Cave from Mendelsohn's *Overture* — but the suggestion of the essence or mood is there.

Similarly, architecture as an accurate mirror of the society it serves, suggests the lucid intellectualism of Greek thought, the dull pomposity of Imperial Rome, the sublime faith of medieval Europe. It reflects the despotism of the Sun King at Versailles, the tasteless vulgarity of the 19th Century, the eclectic uncertainty of the turn of the century, the crisis of our mid-century.

One art is materially ethereal; physically nothing but a system of vibration in the air; instant birth and death at each performance. The other art is materially solid in steel and concrete, glass and stone; a birth of heavy labour, a useful life span and frequently a technically obsolete old age. In one art, the gate to the mind and spirit is the ear alone; in the other art the gate is the eye and the touch. One art nurtures solely that

mind and spirit; the other serves body, mind and spirit. One is primarily an art of time, the other is primarily an art of space.

Music requires creator, performer, listener. Architecture requires creator, builder, spectator (possibly inhabitant). Both arts fail creatively if they must borrow past form to express present ideals and ideas; both arts fail if they lie completely beyond the understanding of the individual and the society they serve – if they become merely exercises in the personal psychology or viewpoint of their creator. Neither can flourish in a vacuum.

Aaron Copeland, the American composer, wrote a little book, *What to Listen for in Music*. I am now going to borrow heavily from the subject matter, viewpoint, organization, and I confess, the phrasing of that work, and attempt to parallel its arguments with my feelings about the corresponding architectural relevancies under the headings – listening to music, the creative process in music, the elements of music, musical structure.

Then I hope by recordings (*Note: See list of recordings used at the Vitruvian Society Meeting at the end of this article*) and comment against this background to draw to your attention certain interesting and significant parallels between specific great works of music and architecture. First: on listening to music and on looking at architecture there are three ways of listening to music and looking at architecture – the sensuous, the expressive (either in mood or literally), the technical.

When we listen to music sensuously we are concerned with the pleasure of sound and we turn on the radio while doing something else and rather absent-mindedly bathe in the sound, or we go to concerts in order to lose ourselves. Many people never get beyond this brainless and unrewarding plane of musical anaesthetics. Sensuous appreciation of architectural form, a delight in form for form's sake has at best, produced the qualities of great baroque architecture, and at worst, misapplication of the sensuous is a contributing factor to the weak acceptance of an eclectic architecture. The cliché, musically and architecturally, is to a large extent of sensuous derivation.

It is a rather common fallacy that the worth of music depends on its sensuous appeal and that the loveliest sounding music is made by the greatest composers – if so Debussy is a greater composer than Bach – architecturally the Taj Mahal is a greater building than the Unité d'Habitation.

Listening to the expressive quality of music raises the question – is there a meaning to a piece of music? – as a rule, yes. Can you state in so many words what the precise meaning is? – as a rule, no . . . but the music can express a general concept . . . serenity, exuberance, triumph, sorrow, rage. The concept of expressive generalization apparent in music is directly applicable to architectural works – the search for expressive form is one of the most important aesthetic problems of modern architecture. Failure to derive rich expressive form frustrates the modern home, defeats our ability to create monumentality, shackles the multi-storied building to the slab and the pilotis, results in schools that partake more of industrial architecture than the lives and joys of little children – and the public our architecture serves in some dumb untutored way recognize and resent this defect.

When either architecture or music moves from expressive generalization to specific suggestion, the result is at best problematical – the endeavour to produce program music which sounds realistically like say a railway train is in the same dead end category as an attempt to compose the facade of a Hydro building like a frozen waterfall.

Music, the more abstract and etherial of the two arts is more successful in combining direct suggestion with expressive generalization – and none would deny the deep expressive beauty of Debussy's *La Mer* or *Des Pas Sur La Neige*, but it sometimes seems to me this music never reaches far below the surface.

In this consideration of expressive form there lies another architectural musical parallel – music that always says the same thing becomes boring – a problem that plagues much of Tchaikovsky's music. Music that is slightly different with each

hearing has a greater chance of living. Buildings that always say the same thing are boring – in this regard current commercial architecture is somewhat suspect.

It is an entertaining coincidence that expressive form in architecture should find contemporary execution in the work of the late Eric Mendelsohn, the same in name as he who composed *A Midsummer Night's Dream*.

Now to consider the third way of listening to music and of looking at architecture – the technical plane. In music this has to do with the notes and their manipulation, it concerns melody, rhythm, harmony, tone colour – the whole question of musical form. In architecture it has to do with materials and methods of construction, the question of functional planning, the utilities of shelter.

In recognizing these three planes of perception in music and architecture – sensuous, expressive and technical it is obvious that the division is unrealistic – we see and listen in correlation. All three ways at the same time. Copeland draws an instructive parallel with a night at the theatre –

"You are aware of actors and actresses, costumes and sets, sounds and movements – all these give one the sense that the theatre is a pleasant place – the sensuous plane in our theatrical reactions. The expressive plane in the theatre would derive from the feeling you get from what is happening on the stage. . . You are moved to pity, excitement or gaiety. It is this general feeling, generated aside from the particular words being spoken, an emotional something which exists on the stage that is analogous to the expressive quality in music. The plot and plot development is equivalent to the technical plane. The playwright creates and develops a character in just the same way that a composer creates and develops a theme. According to the degree of your awareness of the way in which the artist in either field handles his material will you become a more intelligent listener."

The parallel in architecture is too obvious for comment. As far as the creative process is involved the path of the architect and the composer obviously differs. The composer, working from our point of view in a delightfully irresponsible vacuum, must think of a musical idea – perhaps a melody or a rhythm idea. Now he must examine its expressive character – is it sad or gay, triumphant or contemplative – or are there several alternative expressions appropriate? Then is it best for symphony or the intimacy of a string quartet. Then there is the question of other ideas with a bridge between ideas or as in Wagner, the elongation of an idea, – but above all – a sense of flow, of continuity or unity. Here in this last regard good music and good architecture meet again.

The architect as creator most probably starts with the problem to be solved – it is posed by client and by site. It must be given expression in form and material and in accordance with the economics of the situation. The prop of functionalism is available to support the architect. This prop may prove a crutch – using but this prop, the Mother of the Arts may cut an unsatisfactory figure as a pole-vault champion.

In thinking of the composer and architect as creators there are some interesting parallels:

The spontaneously inspired – In music a Schubert who could not write down the melodies so fast did they tumble from his musical soul. In architecture – I would doubt if this species exists or could exist with the possible exceptions of A.P.C. Adamson and Bernini.

The constructively inspired – In music a Beethoven who could work day after day carefully shaping the idea into a theme. I'm sure most architects are of this order. The works of John B. Parkin Associates, for example which are variations on a theme by Mies for unaccompanied steel contractor are I am sure shaped gradually with logic, poetry, and imagination and do not spring full glazed before their creators' eyes.

The traditionalist – In music a Johann Sebastian Bach, born when expressive form is about to reach its fullest development and inspired to render that art better than any-

one else ever did it — but still creatively. This conception of traditionalist is remote from our architecture idea of a traditionalist and has nothing to do with obsolete forms valid for another age. In this context, where Beethoven and Schubert originated, Bach improved. I am sure we could agree that the mid-20th Century is neither musically nor architecturally such a period. We must reconcile ourselves to not producing the definitive work as did Ictinus with the Parthenon.

The pioneer — This type of creator, architectural or musical is the opposite of the traditionalist for he opposes conventional solutions to the problem. This pioneer type musically speaking was the character one at the turn of the 17th Century and the beginning of the 20th Century. In the 19th Century, Berlioz comes to mind; in the 20th Century Debussy, and later Schoenberg. In architecture the type is harder to recognize, but one might mention Brunelleschi (the Foundling Hospital in Florence) or Le Corbusier.

Four elements are discerned in music — rhythm, melody, harmony, tone colour. I propose to examine these elements and draw architectural parallels.

Rhythm means time control, and most agree that the primal origins of music are rhythmic. Historically, it was about 1150 that 'measured music' began — till then much of music was vocal accompaniment to spoken prose and poetry. This development was characteristic from Grecian times to the full development of the Gregorian chant. To this unwritten and complex music in many senses modern jazz music returns.

Measured music helped divorce music from words and made its exact reproduction from generation to generation possible. This dubious service Vitruvius also rendered to architecture. But measured music restrained individual improvisation and rhythmical imagination. Good jazz with its complex rhythms changing with each bar (of music that is) and with its poly-rhythms or several complex rhythms woven at the same time is of this order. — The base rhythm plus the free rhythms. Speaking of these matters a Scottish student critic Gordon Dimmers of the Glasgow School of Architecture has noted that in architecture "two or more different but related rhythms may be set up together when in Gothic Cathedrals the same triforium arches are super-imposed upon the dominant arches of the nave. In music a beautiful illustration of this is found in Bach's choral *Jesu Bleibt Mein Freunde* in which the predominate theme is superimposed over an accompaniment progressing at three times the speed."

Man has an intuitive desire for order in design — in architecture order manifests itself in fenestration, column spacings. This rhythm may be simple as in columnization of a Roman temple, or subtly graded as in the spacing of the end columns of the Parthenon, or boldly graded as in the arches of a Roman bridge. Circular plan, as in the Roman Coliseum, imparts a graded effect. Orderly rhythm is almost essential in architecture.

Now secondly for melody — Copeland comments that "rhythm is physical motion and melody is connected with mental emotion."

It is as difficult to answer, what makes a good melody as it is to define what makes a good building. But I believe both would exhibit these characteristics — good proportion (conformity among masses, conformity among the movements) long flowing melodic line or continuity; low and high points of interest, — a climatic focus or movement, no boring repetition, and most important an emotional impact for the listener or observer.

Melody is of course based on the musical scale. Scale in music is an arrangement of a series of notes, not arbitrary but based on physical fact. Aside from Oriental, Greek and Ecclesiastical scales, it should be noted that the modern scale is based on 12 divisions between a note and its octave. Most music is based on 7 tones — 2 whole followed by a $\frac{1}{2}$ plus 3 followed by a $\frac{1}{2}$ — this is called the diatonic scale. I have not the time and little of the knowledge and you have not the patience to go into

the problems of major and minor modes, the tone, harmonic and subdominant constructions. The scale has its basis in mathematics. When Mr Grossman addressed the Vitruvians some time ago on architectural mathematics I was reminded of this parallel. Rudolph Wittkower in his *Architectural Principles in the Age of Humanism* gives a lucid account of the problems of harmonic proportion in architecture.

It dawned upon medieval architects and became clear to Renaissance architects that identical ratios could be and ought to be employed in architecture. Leone Battista Alberti said, referring to Pythagoras, "the numbers by means of which the agreement of sounds affect our ears with delight are the same which please our eyes and minds". Palladio said, "the proportions of the voice are harmonies for the ears; those of the measurements are harmonies for the eyes." This is much more than a vague metaphor. It is strange to note that in the Renaissance period, architectural proportions adopted the same changes in aesthetic range (i.e. the same changes in taste) which were sanctioned in musical theory of the time. Thus the 15th Century architect confined his adoption of intervals to octave and $1/3$ which are 2 to 1 and 3 to 2 relationships. In the late 16th Century when $1/3$'s and $1/6$'s were admitted to musical consonance — these same ratios were admitted to architectural proportions. Wittkower discovered that Andrea Palladio first used musical proportions for single rooms and groups of rooms.

In modern times, Arnold Schoenberg, a pioneer melodic experimenter, has worked in melodies with no tonal centre and in the full 12 tone scale. He imposed regulations in his work as for instance that there is no repetition of any of the 12 tones until the other 11 have been sounded. These endeavours and Corbusier with his double-barrelled modulator, I view with some suspicion.

I find it difficult to develop constructive parallels in music and architecture with reference to the third musical component, *harmony*. Harmony in music is a study of chords and their relationships — it is a sophisticated element evolving after the 9th Century wherein rhythm and melody came naturally. We have evolved from primitive harmony ($1/4$ below or $1/5$ above), through descant (melodies moving in opposite directions) after three hundred years to today's pathfinders. Debussy, Schoenberg, Stravinsky have abandoned harmonic tonality and have deliberately experimented in a wider range of atonal harmony, and dissonance. The only thought that comes to mind is that, just as the listener to modern music has extended his 'consonant ear' to this wider range, so the observer of modern architecture has accustomed his eye to transparency and dissolution of weight and to new proportions foreign to the established orders.

With reference to the last musical element — *tone colour* — the architectural parallel is obvious. Tone colour is quality of sound produced by a particular medium of tone production. By tone colour we tell bass from soprano, tuba from cello. For tone colour the instrument had to be invented, then perfected, then players had to achieve mastery.

In architecture the materials are invented then developed, then we must learn to use them. The tremendous range of materials available to the modern architect make this 'tone colour' of our work sometimes sadly experimental and inappropriate, but this is a transitional time. Just as the musical composer knows that in tone colour a particular instrument can only play so loud or soft, so high or low and has certain limits of execution, so the architect must sort out appropriate use for materials and not misuse them. Making metal look like wood, dressing structural steel or concrete framing up like load bearing construction is of this order of falsity. As with the musician the architect must select the right tone colour. In the lovely *Après-Midi d'un Faune*, Debussy unerringly and immediately chose the flute for the solo — what material is the logical one and the beautiful one and the expressive one for the new O'Keefe Centre?

I come to the last point of general analysis — *Musical and Architectural Structure*. There are three kinds of music; mono-

phonic or simple melody, homophonic or melodic line and chordal accompaniment and polyphonic or separate melodies which combine to form harmonies. Musical structure means the coherent organization of the composer's material. It is analogous to the playwright working in the three act or one act play. The fundamental forms of musical construction are:

Sectional forms — "row, row, row your boat" if I may quote a well beloved and familiar example.

Variation forms — such as a passacaglia which is repeat bass, a melodic phrase and not just a rhythm, — or the theme and variation type of thing.

Fugal form — which is several melodies combining or contrapuntal music.

Sonata form — three or four movements, fast, slow, fast. The symphony is a form of sonata — originating in 1740-1770 with Hayden and Mozart. Beethoven's colossal nine symphonies have not been equalled in power.

Symphonic Poem — which is descriptive of a thing or mood, as for instance, *Don Quixote* by Richard Strauss.

The parallel in music and architecture in construction is very close. The question is not so much the basic construction in each case but rather its development. For example, traditional structure can be fully understood as such in Stonehenge, but the definitive architectural expression is realized in the Parthenon. There are added intellectual qualities of proportion, massing, detail, and linear subtleties; skill qualities of craftsmanship and use of materials; emotional qualities of internal and external dramatic effect under the skies of Greece. Pure structure with little emotional expression and with intellectual pretensions predominant, exist in the four squared steel frame structure. There is generated therein some emotional qualities from precise order and elegance of proportion. Parallel specimens of 'pure structure' in music exist in Bach's *Art of Fugue*. In this great intellectual work which fully exploits all possible form of fugal construction there is no intentional release of soul or feeling. But the beauty of perfectly related material and craftsmanship lifts this mighty work into the highest realm of abstract art. As with architecture the disciple of form becomes a creative aesthetic device of supreme importance.

When I agreed to prepare this paper I did so realizing that architecture is to be seen and music to be heard; words are not of their essence. I decided therefore to try something which may well turn out exceedingly corny. I hope to give some sort of direct application to my remarks by playing certain music and setting with it certain architecture to make this question of parallel clear. The conception I wish to deal with musically and architecturally is that there are two orientations for artistic creation which, for want of a better word we will call classic and romantic. By classic I mean a work of the rational intellect, where great stress is laid on structural forms, proportions, refinement of detail, elegance of craftsmanship; it is definitely artificial, man made, a conscious work of the intellect in the face of the natural environment. By romantic I mean a work of the emotions. In a classic work I propose to parallel Greek architecture (could I have chosen Mies' Barcelona Pavilion) with the music of Bach; a transitional work, Roman engineering with the music of Beethoven; for romantic work — F.L.W.'s architecture with the music of Brahms.

1. *Greek Architecture and Bach*: The Parthenon is the supreme cultural achievement of mankind in stone, the artifact of Hellenic Greece at its highest level. The trabeated construction imposed technical limits but made for unity. Unsurpassed aesthetic refinement from the building as a whole to the smallest detail is apparent. It is only the informed (intellectual) observer who thrills to this achievement. To the laymen its qualities of the mind are in the main hidden. But as the supreme physical statement of Greek culture it reproves indifference and demands the most searching study. Emotional appeal is sub-

ordinate to lofty intellectual ideals — ideals of balance, proportion, detail, ornament, optical correction, superhuman workmanship. In the setting out of each single line the Greek eye carried even further the initial impetus of mathematical precision. It is a thing of high and abstract beauty.

Bach: The initial reactions of the unrefined listener to a great masterpiece of Bach are almost identical with the reactions of the uninformed beholder of the Parthenon. Regularity of simple rhythm may seem monotonous; rich interplay of melody may be only complexity. But discipline of structure and thought will recall the Greek temple.

Bach's mind was primarily an intellectual one. He never gives way to bombastic or sentimental expression. He must be listened to contrapuntally; letting the mind trace the rich weaving of melodies into harmony. The structure is evident in beautiful discipline.

2. *Roman Engineering and Beethoven*: The culture of Rome was materialistic, the religion a state formality and the main concern was the glorification of the Roman state and Empire. The architecture of Rome was inferior to that of Greece in subtlety, restraint and refinement. Mouldings and shapes came under the rigid dominion of simple geometry finally codified out of creativity by a gentleman who some twenty centuries later had a club of some fifty fellow professionals named after him for reasons beyond my comprehension. Craftsmanship was second rate and there was no feeling for nature in settings. It is to Roman engineering we must look for contributions to architectural progress. Here we find something down to earth, serving its time, powerful, creative, new and competent, emotionally stimulating, a natural transition from Greek intellectualism to romanticism.

Herein lie parallels with the music of Beethoven. Beethoven liberates his emotions without restraint. The work is not polished and refined as with Mozart, nor does it achieve the intellectual height of Bach. Orchestration is often heavy and he is not quite at home with exacting counterpoint. But this great music thunders its disturbing messages to his day and to ours and abounds with creative new form and daring innovations. Revolutionary at its time, it is very much in touch with present day conceptions.

Wright and Brahms: Lastly I would pair for your consideration two great romantics, Frank Lloyd Wright and Johannes Brahms. Wright's work makes an immediate, if frequently controversial romantic appeal — it is architecture of the grand theme. At his best Wright is of the earth, poetic, sensitive to nature, dramatic, powerful, human and superhuman. His buildings even in full maturity never lose sight of indigenous architectural origin. So it is with Romantic Music.

The Classic of architecture and music is at best a triumph of the mind, at worst a sterile artificial academism.

The Romantic way of architecture and music is at best an emotional outburst of deep and sincere meaning, rooted in its people. At worst it effuses irrelevant and nauseating sentimentality.

On what road the two arts we have examined tonight will proceed is open to question. The signposts for architecture point to increased derivation in social understanding of the individual and the community, and in technical regard for lightness, simplicity, transparency. In music I believe we will see increasing careful listening to music at a smaller scale, solo instruments trios, quartets, sonatas, and a music possibly less experimental, more interpretive of our age.

In the meantime the Spike Joneses of Architecture and the Vitruvii of Music will undoubtedly continue to march backwards into the future.

A list of recordings used in presenting this paper appears on page 106.

VIEWPOINT

Has symmetry of plan or elevation a place in contemporary architectural design?

There always has and always will be a place for symmetry in design. To deliberately force a design into a symmetrical composition is as equally pointless as to force a design into asymmetry. Most designers must realise, however, that only in the smaller elements of planning does a useful plan give consideration to symmetry, while the exterior may be quite symmetrical and may comfortably accommodate a collection of rooms varying in size and use. In fact, in a large façade composed of small units we depend upon the application of symmetry to resolve order and repose, in much the same way as nature has clothed the human body with a functional symmetrical exterior cloaking a diverse arrangement of internal organs.

H. F. Brown, Toronto

This question is obviously looking for a dogma in architectural design. An answer for good design cannot be found in any dogmas, slogans or other gimmicks. It is ridiculous to form an opinion about the validity of symmetry with particular reference to elevation or plan only. Symmetry in architecture is a condition of space or form where everything is balanced in relation to an axis or focus. An auditorium, a conference table or a highway bridge may logically find its form in symmetry. However, many other elements of form and space, motion, rhythm, time would often become impossible if subordinated to the rigid rule of static balance.

Sense for form and space, and not any formulae, will make the architect move freely in the dynamics of modern architecture. In every case, the architect's space conception will determine the validity of symmetry.

Ants Elken, Toronto

I can see no reason why the contemporary architect should not use a symmetrical design if it is the natural outcome of an architectural problem. I only object to symmetry when it is forced upon an architectural solution which obviously does not demand it. I can think of one building type, the auditorium, whether it is used as a theatre, concert hall, or church, which generally demands a symmetrical plan, and where a symmetrical aesthetic solution will probably present the most logical architectural expression. Symmetry is the outcome of a search for a clearly visible architectural order, used with skill symmetrical compositions can reach the greatest heights of architectural expression.

Plan and elevation are merely diagrammatic representations on paper of an architectural concept in three dimensions. Symmetry in plan and elevation is therefore meaningless unless it can be read in the three dimensional reality of the building or the spaces enclosed. To give one example a symmetrical city or community plan is of no value, as the symmetry cannot be perceived except from a plane on a clear day.

Henry Fliess, Toronto

Symmetry has been synonymous with architecture since the birth of rational design, and should continue to be a dominant factor in contemporary planning. A too rigid adherence to the principle of symmetry for its own sake has, and will, ruin many designs which, in all other aspects, might be considered suc-

cessful. When this rigid law is applied to the exterior planning requirements, such as approaches, roads, and parking areas, its great shortcomings become evident. However, above the ground floor of tall structures, symmetry can be very desirable in providing the means for an economy of plan, elevation and structure, contributing in large measure to the features of repose and stability so necessary for successful design.

William G. Leithead, Vancouver

Yes, it has. Having taken my stand on the side of the angels, however, I hasten in true professorial manner to qualify and amplify my answer.

Symmetry, The Shorter Oxford English Dictionary, Third Edition 1955, defines as "mutual relation of parts in respect to magnitude and position, or relative measurement and arrangement of parts". It is in this sense that I recognize that symmetry has a place in good architectural design. It has a timeless place and characteristic of all good buildings, contemporary or ancient. Symmetry derives its basic meaning from the Greek *metros* or measure.

One other thought on symmetry — one ought to be concerned with symmetry of experience not only with symmetry of design, with its implication of pencil-paper, T-square and the traditional axis. Symmetry has a place in design if considered in its physiological and psychological totality. The symmetry of experience includes space between buildings, the nature of the building materials, texture, colour, not only form; in that sense symmetry is an aspect of sensorial responses to the building, its location and relation to all other parts of the environment.

H. Peter Oberlander, Vancouver

My answer to this would be a definite "Yes". The contemporary approach to planning and design so often results in asymmetrical solutions, — and perhaps rightly so. However, the thinking that symmetry of plan or elevation belongs only to classic or traditional architecture, and should be avoided at all costs in our contemporary work, is narrow and misguided.

The human body is basically an organism of symmetry. Much plant and animal life is symmetrical in structure. These facts alone would suggest that the idea of symmetry is not passé, and should be considered in the design of our buildings today.

The application of symmetry to contemporary architecture should be developed in a three dimensional space conception, rather than in a study of flat two dimensional geometrics, as was so often the case in traditional work. To preconceive a symmetrical form, and force our building functions into such forms, — is wrong. Identity of use in building types such as semi-detached housing units, calls for symmetry because of their very nature. Duality of function which results in duality of elements of plan or elevation, will invariably result in symmetry.

Proper application of symmetry can create such things as formality, composure, and perfect balance in a more direct and understandable manner than can asymmetry. These qualities are often called for in buildings of our present day society.

Ernest J. Smith, Winnipeg

This month we were happy to receive an unsolicited answer to the above question from Professor Lasserre who was extremely interested in the subject. As there was no room for his letter here, it has been moved to page 105.

NEWS FROM THE INSTITUTE

CALENDAR OF EVENTS

Exhibitions at the Art Gallery of Toronto

— Canadian Society of Painters in Watercolour,
March 24th to April 22nd, 1956.

— Ontario College of Art, March 24th to April 8th, 1956.

Annual Meeting of the Manitoba Association of Architects, University of Manitoba and the Royal Alexandra Hotel, Winnipeg, April 28th, 1956.

88th Convention of the American Institute of Architects, Hotel Biltmore, Los Angeles, California, May 15th to 18th, 1956.

Annual Meeting of the Nova Scotia Association of Architects, Halifax, May 18th, 1956.

Annual Meeting of the Engineering Institute of Canada, Mount Royal Hotel, Montreal, May 23rd to 25th, 1956.

British Architects' Conference at Norwich, England, May 30th to June 2nd, 1956.

Annual Assembly of the RAIC, Banff Springs Hotel, Banff, Alberta, June 6th to 10th, 1956.

75th Anniversary Celebration of the American School of Classical Studies at Athens, Greece, August 31st to September 2nd, 1956.

MANITOBA

Although all members are busily engaged in a perhaps unprecedented volume of office work, there has been considerable interest shown in the activities of the various Association Committees.

Under the enthusiastic direction of our President, C. N. Blankstein, a continuing liaison with the Winnipeg Builder's Exchange has been effected. The implementation of a Bid Depository system for tendering is about to become a reality. On the matter of Equals and Equivalents much work has been carried out on the preparation of specification additions to cover procedure when applying for approval of equivalent materials or methods. The client, architect and contractor should all benefit from the clarification provided on these subjects.

A Committee is now studying "Architectural Services and Compensation" with regard to possible revision of the fee schedule. Much interest accompanies the activities of this group.

A home Building Committee is examining housing development work in an attempt to provide a better understanding regarding fees and services. In this increasingly important field a study of the various aspects of the problems involved seems imperative at this time.

Our Program Committee has arranged several luncheon meetings that have been well attended and have provided interesting topic discussion.

In co-operation with the School of Architecture a Lecture-ship Fund has been created. Richard Neutra visited Winnipeg in late January and his lectures were enthusiastically received by students, architects and public. Norman C. H. Russell is to be complimented for his efforts to provide adequate activity within the Association.

A brochure on "The Architect" has been made available to our members for distribution.

Programming is now being prepared for our Annual Meeting on April 28th.

K. R. D. Pratt, Winnipeg

ONTARIO

It has been years since modern architecture has claimed to have found salvation from the Victorian "jungle of forms", thinking that its forms have created a style that will mark our era. But have we not failed to recognize the difference between a 'potential style' and a 'style that marks an era'? Gothic and Romanesque marked the Middle Ages; but does not modern architecture still only exist as a potential in the minds of architects and the pages of professional magazines? Indeed, there are excellent examples of modern architecture; but they are lost in cities whose general appearance is horrible.

Our modern world has created a technology that has brought with it new forms; but our modern world has also created social changes that have brought with it a new client that the architect must fully recognize. A painter or composer can express his art without any acceptance from the public at the time. The ideas are within him — the execution within his hands. Different the architect. The ideas are within him; but the execution is a complicated procedure involving an economic system controlled today by public opinion. In ancient times, the understanding of an educated minority was sufficient to make architecture flourish. However, today, the general public is the client and unless this majority recognizes the basic need for better forms, our efforts will be in vain and modern architecture will remain as it now exists — an interesting example of individuality, incapable of changing the face of our cities.

If Ortega Y. Gasset is right that "modern art is the art of a privileged 'aristocracy of the senses',"* then modern art will remain unpopular and modern architecture unfulfilled. It seems then that the great experiment of our time is to prove whether or not the ruling majority can be educated to appreciate the need for modern architecture. This is the great task our profession has to fulfil, and unless we succeed, modern architecture will wither and with it, the cities we dream of.

Eberhard H. Zeidler, Peterborough

*Ortega Y. Gasset, *The Dehumanization of Art*

LA SOCIÉTÉ DES ARCHITECTES DU DISTRICT DE QUÉBEC

Lors de la dernière réunion de la Société des Architectes du District de Québec, laquelle assistaient une vingtaine d'architectes, monsieur Germain Chabot prend charge de sa nouvelle fonction de président, en remplacement de monsieur Edouard Fiset.

Robert Blatter donne lecture du rapport financier de l'année terminée. Ce terme se solde par un succès financier tout autant que par une augmentation marquée de l'assistance aux réunions.

En marge de la dernière assemblée annuelle de l'AAPQ tenue au Château Frontenac à Québec, plusieurs membres, dont monsieur Bigonnesse et monsieur Bégin, portent à l'attention des membres le fait qu'une proportion minime des membres de l'Association s'intéresse aux activités de l'organisation. MM. Mainguy et Fiset demandent que les représentants du district de Québec au conseil de l'AAPQ réclament une campagne en vue d'intéresser les membres et particulièrement les jeunes à nos congrès.

G. Bélanger et P. Béland réclament des congrès plus inté-

ressants où la critique architecturale des travaux des membres soit plus importante, de manière à élever le niveau artistique des oeuvres produites dans la Province.

Pour finir la réunion, on décide d'établir un service d'échange de dessinateurs et l'on crée un comité en vue d'organiser une exposition des travaux de nos membres.

Après l'assemblée, A. Robitaille présente des projections sur l'architecture moderne; ces illustrations sont commentées par les membres.

JOURNAL COMPETITION FOR ARTICLES

The Editorial Board proposes to hold a competition with the object of improving the quality and number of articles sent to the Journal by architects.

The following outline of the competition has been sent to the Editorial Board Chairman of each Province, and, with some slight changes, which have been incorporated, is approved.

The articles received in the calendar year 1956 will be considered eligible. The Jury of Award will be announced in the next issue of the Journal. Any questions from members relating to the competition will be published with their answers as early as possible after they are received.

Range of Topics (not necessarily complete)

Aesthetic
Technical
Historical
Sociological
Professional

N.B. All topics are of equal importance in the view of the Jury of Award; in other words, it is possible that the first prize might be given to the writer of a technical article, the second prize to one who wrote on an historical subject, and the third to aesthetics.

Length of Articles

Articles shall be from 2000 to 3500 words in length. These are to be considered approximate figures. Writers should bear in mind that a Journal page with headline is 800 words in length, and a full ordinary page is 1000 words.

Prizes

First prize — \$300.00
Second prize — \$200.00
Third prize — \$100.00
Separate prize — \$100.00 (This prize will be awarded for a paper prepared for another organization, but not previously published)

Jury

The Jury will be drawn from the Editorial Board with the Editor a member. It will be appointed for the calendar year.

Procedure

The Jury will read papers when received and pass for publication. Papers passed in this way will be published when space is available in the Journal. It may well happen that twenty papers are passed, and only twelve published in the calendar year. It is understood that all twenty will be read in determining the annual awards.

OBITUARY

Stanley T. J. Fryer (F) died in Hamilton, Ontario, January 27, 1956. He was born in Sawston, Cambridgeshire, England, May 4th, 1885. After article training in architectural offices in Lowestoft and Bradford, England, he emigrated to USA in 1907 where he was employed by Cram, Goodhue and Ferguson of Boston and by other prominent architectural firms in New York City and Jersey City.

Mr Fryer came to Canada in 1909 and after several years employment with various Ontario firms including Wickson & Gregg, Toronto, he entered practice for himself in Hamilton in partnership with W. G. Evans. During World War I he

served overseas with the 13th Battery Canadian Field Artillery receiving his commission in the field and being severely wounded on the Somme in 1916. From 1917 to 1920 he was Deputy Vocational Officer for Ontario, Department of Soldiers Civil Re-establishment. Later he resumed practice in Hamilton as partner in Fryer & Evans. In the thirties he was employed as designer by Darling & Pearson, Toronto, in which office he made design studies for Trinity School, Port Hope and the Parliament Buildings, Ottawa. Later attached to the office of Commissioner of Buildings, Toronto, he was concerned with the design of the Horse Building and Band Shell in the Canadian National Exhibition and with other public buildings in the Toronto area.

Returning to England in 1936, Mr Fryer was appointed Technical Officer, Civil Building Control, Northern Region under the British Ministry of Works which position he filled throughout the war years until his return to Canada in 1948. In latter years he was associated with Murton & Evans, later Murton & Barnes, in Hamilton, for whom he carried out detail design work on the recently completed Harbour Commissioners Building in that city.

He was President of the Ontario Association of Architects in 1923 and 1924 and was elected FRAIC in 1925.

W. M. Shaw

FELLOWSHIP

Through the generosity of George B. Ridout a \$1,500 fellowship will be awarded annually to a graduate student taking the course in Town and Regional Planning in the University of Toronto's School of Architecture.

The fellowship is an indication not only of the growing awareness of the importance of town and regional planning, but also of the particular interest of large scale developers in the improvement of planning techniques and the sound and economical use of land.

The course in this subject, designed for those who wish to enter the planning profession, requires the full time attendance of students for one year. To be eligible for a fellowship, a candidate must hold a university degree.

The basic courses in the Division of Town and Regional Planning include: 1) Practical work, in which problems are studied in the field and in the drafting rooms; 2) Theory and Principles of Town and Regional Planning, a series of lectures which survey and examine the theories and principles underlying modern town planning practice; 3) A weekly seminar on town and regional planning literature; 4) A lecture course on Local Government, in which executive planning powers and functions are described. In addition the following lecture courses are required; 5) Community Planning Law in the School of Law; 6) Municipal Engineering in the Department of Civil Engineering; 7) one other approved course in the university.

Fellowships are to be awarded by a committee, including the president of the university or his representative, the director of the School of Architecture, the head of the Division of Town and Regional Planning, and Mr George B. Ridout or his representative.

Applications must be submitted by May 31st, 1956, on forms obtainable from Professor Gordon Stephenson, Division of Town and Regional Planning, School of Architecture, University of Toronto, Toronto 5, Ontario. Requests for additional information should be addressed to him.

VIEWPOINT

(continued from page 103)

Axial planning or design is a way of thinking. One could almost say that it is thinking: the clear logical enunciation of a concept. A great deal of loose mental doodling is passed off as thinking. A great deal of graphic doodling is peddled around as planning.

If one establishes precisely the kernel purpose or goal of our thinking — or our planning — a symmetrical concept emerges

which is bolstered and eventually supported by relevant and ancillary ideas — or parts. The planning and design of any great piece of architecture is essentially symmetrical in the direction of its basic concept: e.g. the church and its altar, or, as in another field, the human body and its motility. Any building which is allowed to emerge confused, unbalanced and uncontrolled in its disposition of spaces and parts will not lastingly transmit its architectural message. Further, such mundane elements as structure, heating, ventilation and so on are almost certain to be inefficient and distorted. Symmetry at once denotes order, control and efficiency of purpose . . . the sublimation of an idea.

While this symmetrical goal cannot always be achieved physically, it should remain the guiding definition of purposeful thinking. I submit that, though it must not be arbitrarily imposed on any plan or elevation, symmetry should be striven for today as much as in the past (it might help us out of our social and moral and hence architectural confusion). Symmetry must emerge out of organized conceptual thinking, as unaffectedly as it does in the natural and physical world around us.

Let us stop being childish about centre lines. We all find them useful on the highways, and on our drawings they may help us to do some straight and well directed purposeful thinking and designing.

Fred Lasserre, Vancouver

PARALLELS IN MUSIC AND ARCHITECTURE

(continued from page 102)

1. On Listening to Music and on Looking at Architecture — the three ways of listening to music:
 1. Sensuous — Capriccio Espagnol Opus 34, Rimsky-Korsakoff; London Symphony Orchestra; Conductor, Hermann Scherchen; Westminster Records, Laboratory Series W.Lab. 7002.
 2. Expressive — La Cathédrale Engloutie, Debussy; Walter Gieseking; Angel Records, 35066.
 3. Technical — Chaconne for Unaccompanied Violin, Johann Sebastian Bach; Arthur Grumiaux; Boston Records.
2. Four Elements are Discerned in Music:
 1. Rhythm — Music of Africa Series, #7 Congo Songs and Dances, recorded and selected by Hugh Tracey; London Records — LB 831.
 2. Melody — Quintet in A Major Opus 114 (The Trout), Theme con Variazione, Schubert; Vienna Concert House Quintet; Westminster Records W.L. 5025.
 3. Harmony — Messa de Gloria, Puccini; Soloists, Chorus, Scarlatti Orchestra di Napoli; Colosseum C.L.P.S. 1053.
 4. Tone Colour — Capriccio Italien Opus 45, Tchaikovsky; London Symphony Orchestra; Conductor, Hermann Scherchen; Westminster Records, Laboratory Series W.Lab. 7002.
3. Parallels in Music are Architecture:
 1. Classic — Johann Sebastian Bach, Concerto No. 1 for Violin and Orchestra (in A Minor); Walter Barylli, Violin; Orchestra of the Vienna State Opera; Conductor, Herman Scherchen; Westminster Records W.L. 5318.
 2. Transition — Ludwig van Beethoven, Concerto No. 5 in E Flat Major (Emperor); Clifford Curzon; London Philharmonic Orchestra; Conductor, George Szell; London Recording LLP 114.

3. Romantic — Johannes Brahms, Symphony No. 1 in C Minor Opus 68; Toscanini and the N.B.C. Symphony Orchestra; R.C.A. Victor Red Seal Recording LM 1702.
4. Modern — Prokofiev, Scythian Suite Opus 20; Eugene Ormandy and the Philadelphia Orchestra; Columbia Records ML 4142.

POSITION VACANT

Architectural Draughtsman wanted by Kerr & Cullingworth, Architects, 108 Ross Building, Saskatoon, Sask. Reply giving details of experience and salary required.

BOOK REVIEW

TOWARD BETTER SCHOOL DESIGN by William W. Caudill. Published by Dodge Books, New York. 288 pages. Price \$14.00. William Caudill has an impressive record in research and school design. *Toward Better School Design*, his first commercially published book, has a special distinction about it which makes it valuable reading for all who are interested in building, no matter whether one has ever faced, or ever will face, the problem of planning a school.

It is Mr Caudill's planning approach which is the real value of the book. An approach so sound yet so elementary that probably all of us need to be reminded of its existence from time to time. As the book flap says "Mr Caudill militantly pursues the thesis that each school building is at its best a working solution to the specific problems which caused it to be built". Should this not be true of all buildings?

In a lucid text accompanied by numerous excellent illustrations the author carefully analyzes the problems of scale, physical and emotional well being, colour, texture, materials, costs, site planning etc., and augments this with 91 case studies of actual problems. At the conclusion of each chapter is a useful reference list naming the case studies relating to the material covered in the chapter.

The title "*Toward Better School Design*" is aptly chosen. If the planning approach is followed this reader feels that it cannot help but lead to a better environment for learning. To start the ball rolling the book should certainly be required reading for all architects engaged in planning schools and, perhaps it would not be too inappropriate to suggest, all school administrators and Boards of Education contemplating school building programs.

George Abram

◉ CANADA



A brave front